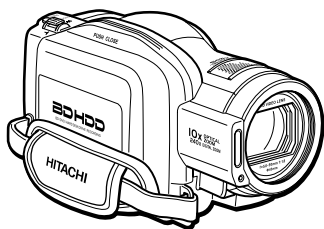


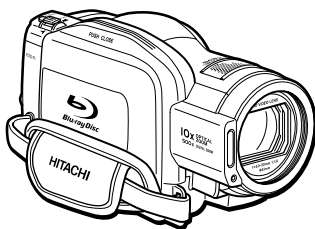
Instruction Manual (English)

HITACHI
Inspire the Next

DZ-BD7HE/DZ-BD70E DZ-BD7HE (UK)/DZ-BD70E (UK)



DZ-BD7HE/DZ-BD70E (UK)
(Hybrid BD Camcorder)



DZ-BD70E/DZ-BD70E (UK)
(BD Camcorder)

Introduction

HDD/BD/DVD/Cards
Battery Pack

Let's Get Started
Recording — Viewing — Dubbing

Various Recording
Techniques

Dubbing on BD/DVD
(DZ-BD7HE)

Editing

Viewing on the
Other Devices

Connecting to
your PC

Additional
Information

HDD
hard disk

Blu-ray Disc

DVD
VIDEO
RAM

RAM
COMPATIBLE

SD

HDMI™

Thank you for purchasing this Hitachi Camcorder.

Please read this Instruction Manual to understand its proper use.

Regarding the differences between the DZ-BD7HE/DZ-BD70E (UK) and the DZ-BD70E/
DZ-BD70E (UK), please first refer to "How to Read this Instruction Manual" (p.11).

Also, "(UK)" of the DZ-BD7HE (UK)/DZ-BD70E (UK) is omitted in this manual unless
otherwise description of difference is needed.

Before opening the CD-ROM included with this product, please read p.184.

After reading the Instruction Manual, store it safely.

The Instruction Manual contains an illustration of the DZ-BD70E/DZ-BD70E (UK) on the cover
page only.

Important Information

For Your Safety

The power switch turns the camcorder on and off, leaving the date/time feature unaffected. If the camcorder is to be left unattended for a long period of time, turn it off.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

WARNING: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE.

The camcorder and AC adapter/charger have the following caution marks.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Identifications of caution marks



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully to avoid any problems.

Precautions

WARNING: Many television programmes and films are copyrighted. In certain circumstances, copy-right law may apply to private in-home videotaping of copyrighted materials.

The liquid crystal display (LCD) panel is made by highly precise technology. More than 99.99% of its picture elements (pixels) are effective, but some (less than 0.01%) may appear as coloured bright dots. This does not indicate a fault as the LCD panel stretches the limits of current technology.

WARNING: To prevent risk of injury or damage to your camcorder and the AC adapter/charger, use only the DZ-BP14S/DZ-BP14SW/DZ-BP21SW battery and DZ-ACS3 (E) AC adapter/charger.

**CLASS 1
LASER PRODUCT**

CAUTION

This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.

Avoid using and storing the battery pack in places subject to direct sunlight, high temperatures, or near a flame source.

Information for users applicable in European Union countries



This symbol on the product or on its packaging means that your electrical and electronic equipment should be disposed at the end of life separately from your household wastes. There are separate collection systems for recycling in EU.

For more information, please contact the local authority or the dealer where you purchased the product.

Information für Nutzer in den Ländern der Europäischen Union



Das auf dem Produkt oder auf der Verpackung angebrachte Symbol bedeutet, dass Ihre elektrischen und elektronischen Geräte nicht mit dem Haushaltsmüll entsorgt werden sollen. Es existieren separate Recycling-Sammelsysteme in der EU.

Für mehr Informationen wenden Sie sich bitte an Ihre örtlichen Behörden oder an den Fachhändler, bei dem Sie das Produkt erworben haben.

Information utilisateurs, applicable dans les pays de l'Union Européenne



Ce symbole figurant sur le produit ou son emballage signifie que votre équipement électrique et électronique doit être mis au rebut séparément de vos déchets ménagers lorsqu'il a atteint la fin de sa durée de vie.

Il existe des systèmes de collecte séparée pour le recyclage dans l'UE. Pour plus d'informations, veuillez prendre contact avec les autorités locales ou le revendeur auquel vous avez acheté ce produit.

Informatie voor gebruikers in landen van de Europese Unie



Dit symbool op het product of op zijn verpakking betekent dat uw elektrische of elektronische apparatuur na het verstrijken van de levensduur gescheiden van het huisvuil moet worden weggegooid. Er zijn afzonderlijke ophaalsystemen voor recyclage in de E.U.

Voor meer informatie neemt u contact op met de plaatselijke overheid of de dealer waar u het product hebt gekocht.

Information till användare inom Europeiska unionen



Märkningarna av produkter och förpackningar med denna symbol betyder att elektrisk och elektronisk utrustning måste tas om hand separat från hushållssopor när utrustningen har förbrukats. EU har särskilda återvinningsanläggningar för denna typ av utrustning.

Kontakta de lokala myndigheterna eller återförsäljaren där produkten har köpts för mer information.

Informazioni per gli utenti negli Stati dell'Unione Europea



Questo simbolo sul prodotto o sull'imballaggio indica che l'apparato elettrico o elettronico alla fine del suo periodo di vita dovrebbe essere smaltito separatamente dai rifiuti domestici.

Nell'UE esistono altri sistemi di raccolta differenziata.

Per ulteriori informazioni, contattare le autorità locali o il rivenditore presso il quale è stato acquistato il prodotto.

Información para usuarios aplicable en los países de la Unión Europea



Este símbolo en el producto o en su embalaje significa que debería deshacerse de su equipo eléctrico o electrónico, al final de su vida útil, de forma separada del resto de los residuos domésticos. Para estos productos hay sistemas de recogida selectiva para reciclarlos en la Unión Europea.

Para más información, rogamos contacte con la autoridad local o el distribuidor donde adquirió el producto.

**Important for United Kingdom
(for DZ-BD7HE (UK) / DZ-BD70E (UK))**

The mains lead on this equipment is supplied with a moulded plug incorporating a fuse, the value of which is indicated on the pin face of the plug. Should the fuse need to be replaced, an ASTA or BSI approved BS 1362 fuse must be used of the same rating. If the fuse cover is detachable never use the plug with the cover omitted. If a replacement fuse cover is required, ensure it is of the same colour as that visible on the pin face of the plug. Fuse covers are available from your dealer.

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

If there is no alternative to cutting off the mains plug, ensure that you dispose of it immediately, having first removed the fuse, to avoid a possible shock hazard by inadvertent connection to the mains supply.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

Blue= Neutral, Brown= Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire coloured BLUE must be connected to the terminal marked with the letter N or coloured BLUE or BLACK.

The wire coloured BROWN must be connected to the terminal marked with the letter L or coloured BROWN or RED. On no account connect either of these wires to the terminal marked E or by the earth symbol \perp or coloured green or green and yellow.

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SD logo is a trademark.

Blu-ray disc and Blu-ray disc logo are trademarks.

IMPORTANT SAFETY INSTRUCTIONS

In addition to the careful attention devoted to quality standards in the manufacture of your camcorder, safety is a major factor in the design of every instrument. But, safety is your responsibility too. This page lists important information that will help to assure your enjoyment and proper use of the camcorder and accessory equipment.

- 1** Read these instructions.
- 2** Store these instructions for convenient accessibility.
- 3** Heed all warnings.
- 4** Observe all instructions.
- 5** Do not use the camcorder near water.
- 6** Clean the camcorder using only a dry cloth.
- 7** Do not block any ventilation openings. The camcorder should be placed in accordance with manufacturer's instructions.
- 8** Do not place the camcorder near heat sources such as radiators, heat-registering areas, stoves, or other heat-generating apparatus (including amplifiers).
- 9** Protect the mains lead and cord from being walked on or pinched, particularly at the plugs, the mains, and at connection points to the camcorder.
- 10** Only use the attachments and accessories specified by the manufacturer.
- 11** Use the camcorder only with a cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the camcorder. When using a cart to move the camcorder, use caution to avoid injury from tip-over.
- 12** Unplug the camcorder during lightning storms or when unused for long periods of time.
- 13** Refer all servicing to qualified servicing personnel. Servicing will be required when the camcorder is damaged in any way, such as if the mains lead, cord, or plug is damaged, liquid is spilled or foreign objects fall into the camcorder, the camcorder is exposed to rain or moisture, does not operate normally, or is dropped.
- 14** Do not drip or splash liquids onto the camcorder or place the camcorder near objects filled with liquid such as vases.
- 15** Use the equipment (AC adapter/charger) near the mains with easy accessibility.



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■ Choosing a disc to suit your purpose

Recording/Dubbing HD (High Definition) image quality

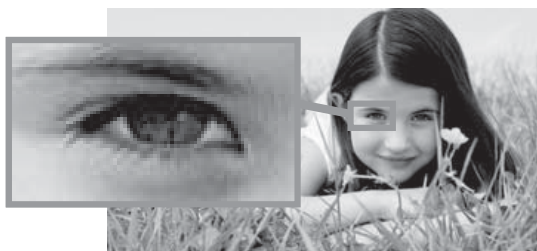


Image resolution: about six times higher
than the SD (Standard Definition) image quality

Recording (DZ-BD7HE)

Recording to the HDD

Recording

Dubbing (DZ-BD7HE)

Recording to Blu-ray disc (BD)

Do you want to delete or edit images
using this camcorder

YES

NO

Re-recordable

Re-recordable

One-time recording

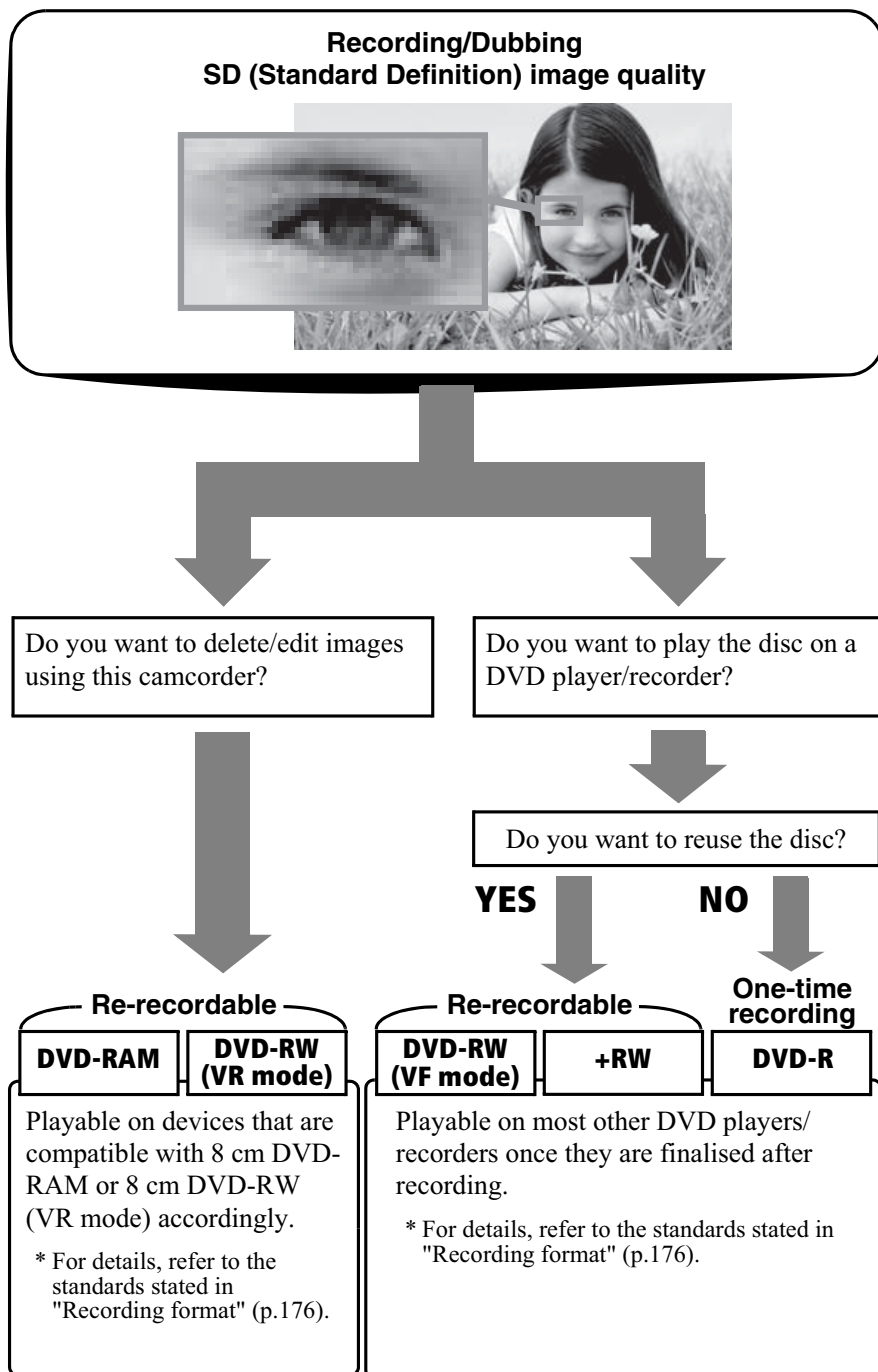
HDD

BD-RE

BD-R

- HD recording over extended periods is possible.
- You can delete/edit the images on HDD using this camcorder.
- After recording or editing, the images recorded on HDD can be dubbed to BDs. Image degradation from dubbing will not occur.
- After recording or editing, the images recorded on HDD can also be dubbed to DVDs (image quality will be standard (SD)).

- One hour length 1920 × 1080 Full High Definition movie can be recorded onto one single BD.
 - Playable on 8 cm BD-RE/BD-R compatible devices.
- * For details, refer to the standards stated in "Recording format" (p.176).



This camcorder can realize all of the following.

Record movies and stills with one device!

Stills



Movies



You can easily figure out
“what” can be recorded
“to which medium”.

Various media

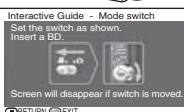
HDD
(DZ-BD7HE)

BD

DVD

SD card

Press to solve
your questions.



After recording

Connect the camcorder to a TV, and view on a larger screen.

HDMI



AV Cable



S Cable



You can easily figure
out which cable should
be used.

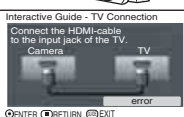
View on the TV



View on the
LCD monitor



Press to solve
your questions.



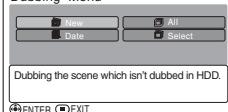
After Watching

Easy to store recordings, select a disc, and create a gift disc.



Disc selection is simple!

Dubbing Menu



(DZ-BD7HE)

BD-RE/BD-R

DVD-RAM/
DVD-RW/
DVD-R/+RW

Press to solve
your questions.



How to Read this Instruction Manual

The Instruction Manual is intended for the DZ-BD7HE and DZ-BD70E models. The DZ-BD7HE can record to HDD (hard disk), BDs, and DVDs. The DZ-BD70E can record to BDs and DVDs.

DZ-BD7HE

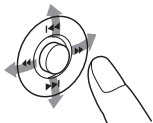


The particular functions of each model will be indicated next to the icons shown at left.

DZ-BD70E

If you purchased the DZ-BD70E, please disregard the descriptions relating to the HDD.

About joystick operation and symbols

Move the joystick up or down, left or right to select menu items and scenes (movies and stills). Press down on the centre of the joystick to confirm a selection.

Operations	Descriptions used in this manual
 <p>Press up/down, left/right to select.</p>	 <p>up/down/left/right</p>
 <p>Press down on the centre to confirm.</p>	<p>Confirmation button</p>

- For more information, see "How to Operate the Menu" (p.65).

About media descriptions

The camcorder functions available vary depending on the media (HDD/BD/DVD/Card) used. Refer to the icon headings shown below to determine whether the function explained complies with the media in use.

* DZ-BD70E does not have an HDD. If you purchased this model, please disregard the HDD icon (p.11).



Collective term	Icon	Media
HDD		Built-in hard disk drive (HDD) (DZ-BD7HE)
BD		BD-RE (Rewritable Blu-ray disc)
		BD-R (Non-rewritable Blu-ray disc)
DVD		DVD-RAM
		DVD-RW (VR mode)
		DVD-RW (VF (Video) mode)
		DVD-R
		+RW
Card		SD memory card miniSD memory card (exclusive adapter required) microSD memory card (exclusive adapter required)

Displays in the Instruction Manual

The display messages are omitted in this manual. Please use the LCD display or viewfinder of your camcorder to check the messages.

Before Using the Product

- Be sure to read this information -

Conduct test recording.

- Before recording important shots, always conduct test recording to confirm that images are normally recorded.

For correct recording

- Do not touch the recording surface of a disc.
- Check that a disc recording surface is not dirty or scratched.
- If the recording surface is dirty, wipe it clean using a soft cloth.

Caution on disc loading

- Never touch the pickup.

Caution on vibrations and impacts

- While the ACCESS/PC indicator (p.15) is lit, do not subject the camcorder to strong vibrations or impacts. Caution should be particularly observed while the indicator remains lit for a while after the end of recording.

About BD/DVD

- We recommend using Hitachi Maxell brand discs. The compatibility of the discs with this camcorder is confirmed.
- If there is concern that the camcorder may be subjected to large vibrations or impact during transport, remove the BD/DVD and protect the camcorder using soft protective materials.

Using BD/DVD with other equipment

- We cannot guarantee that playback is possible on all types of recorders/players.
- Playback may not be possible depending on the model of the playback device or recording status of the disc.
- When a BD-R/DVD-RW/DVD-R/+RW recorded with this camcorder is used on another device, always finalise the disc (p.120) using the camcorder in advance.

Hitachi will not compensate for recorded images.

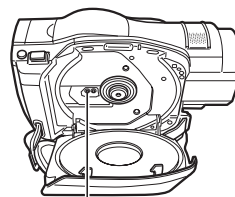
- Hitachi cannot compensate for any damages caused when recording is not made normally or recorded contents cannot be played back because of a defect in the camcorder, disc or card. Also, Hitachi cannot be responsible for your recorded video and audio.
- If you or a third party make a mistake when handling this camcorder, disc, card, etc., the recorded contents may be lost. We cannot be responsible for compensation for damage due to loss of recorded contents.
- In the event that your camcorder is sent for repair, whether repair is successful or not, recorded content may be lost. Hitachi cannot be held responsible for any lost data.

Copyright

- Be aware that recording is restricted for some demonstrations, performances and exhibitions, even for personal enjoyment.



Use a soft cloth and gently wipe the disc surface from the inner to the outer region.



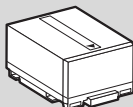
pickup

Checking Provided Accessories

Make sure the following accessories are included in the package.

Battery pack (DZ-BP14S)

Portable power supply for your new Hitachi Camcorder. Be sure to fully charge the battery before use.



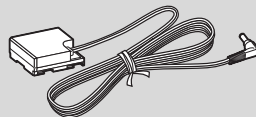
AC adapter/charger (DZ-ACS3 (E))

Use to power the camcorder from the mains, and to charge the battery.



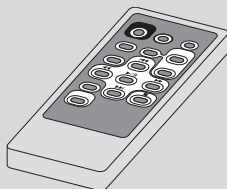
DC power cord

To power the camcorder from the mains, use this cord to connect the AC adapter/charger to the camcorder.



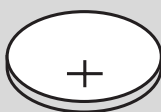
Remote control (DZ-RM4W)

Use to control the camcorder from a distance.



Lithium battery (CR2032)

To power the remote control.



WARNING

Keep this battery away from children. If swallowed, consult a physician immediately for emergency treatment.

Mains lead

Connects the AC adapter/charger to the mains.

For DZ-BD7HE/
DZ-BD70E

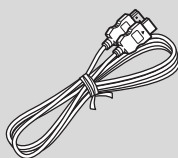


For DZ-BD7HE (UK)/
DZ-BD70E (UK)



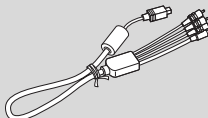
HDMI cable

Use this cable if your TV is equipped with HDMI terminal.



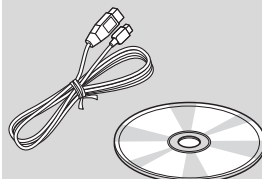
AV/S cable

Use this cable to view images from the camcorder on a TV. Or output the images and sound to another video recording device.



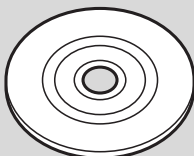
Software CD-ROM and PC connection cable

Install the software on the CD-ROM onto your PC, then connect the camcorder to the PC using the PC connection cable.



8 cm BD-RE single sided disc

Use to record the movies on.



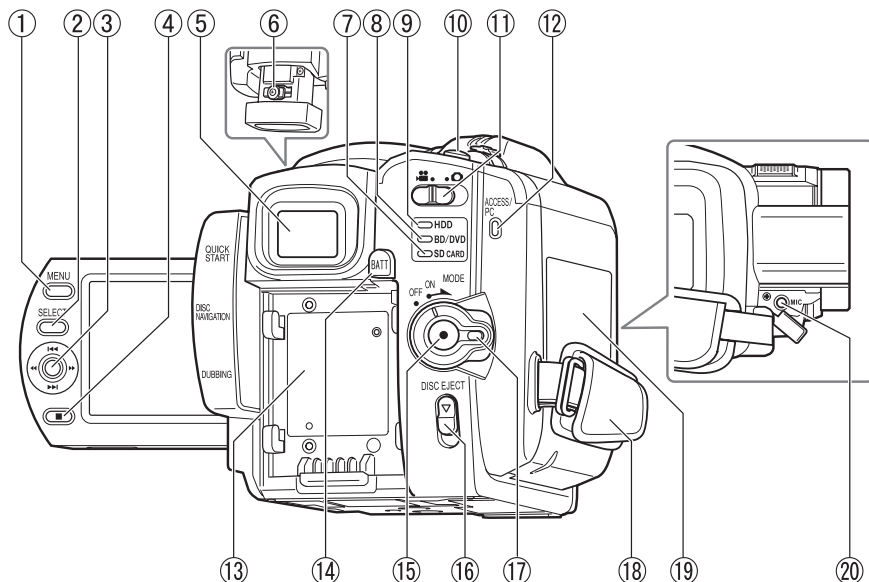
Disc cleaning cloth

You can use this cloth to clean your discs.



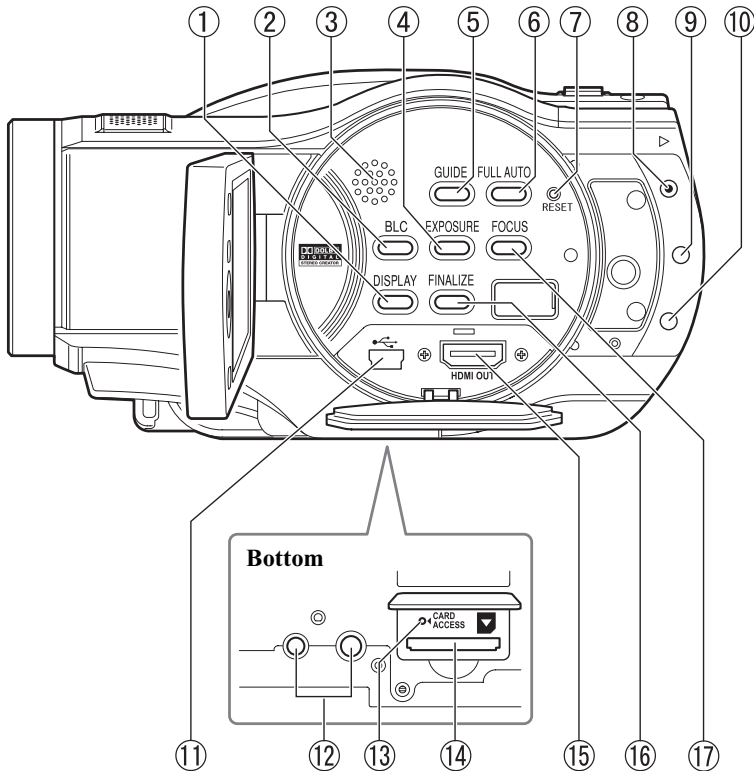
Names of Parts

Viewfinder side



- | | |
|-----------------------------------|--------------------------------------|
| ① MENU button (p.25) | ⑪ Movie/Stills switch (p.26) |
| ② SELECT button (p.55) | ⑫ ACCESS/PC indicator (p.13) |
| ③ Joystick (p.29) | ⑬ Battery platform (p.23) |
| ④ ■ (stop/cancel) button (p.55) | ⑭ BATT (battery eject) switch (p.45) |
| ⑤ Viewfinder (p.21) | ⑮ Record button (p.26) |
| ⑥ Dioptre control (p.21) | ⑯ DISC EJECT switch (p.26) |
| ⑦ SD CARD indicator (p.28) | ⑰ Power switch/Lock button (p.24) |
| ⑧ BD/DVD indicator (p.26) | ⑱ Hand strap (p.19) |
| ⑨ HDD indicator (DZ-BD7HE) (p.27) | ⑲ BD/DVD compartment (p.26) |
| ⑩ PHOTO button (p.28) | ⑳ MIC jack (p.86) |

LCD monitor side (when the LCD monitor is opened 90°), and bottom



① **DISPLAY button (p.50)**

② **BLC button (p.75)**

③ **Speaker**

④ **EXPOSURE button (p.74)**

⑤ **GUIDE button (p.10)**

This button can help you choose a disc, connect the camcorder to your TV, and so on. The sections in the Instruction Manual for which this button can be used are indicated by a pop-up icon like the one below.

Use the GUIDE button for help!

⑥ **FULL AUTO button (p.81)**

⑦ **RESET button (p.163)**

⑧ **QUICK START button (p.48)**

⑨ **DISC NAVIGATION button (p.29)**

⑩ **DUBBING button (DZ-BD7HE) (p.90)**

⑪ **PC connection terminal (p.127)**

⑫ **Tripod receptacle**

⑬ **CARD ACCESS indicator**

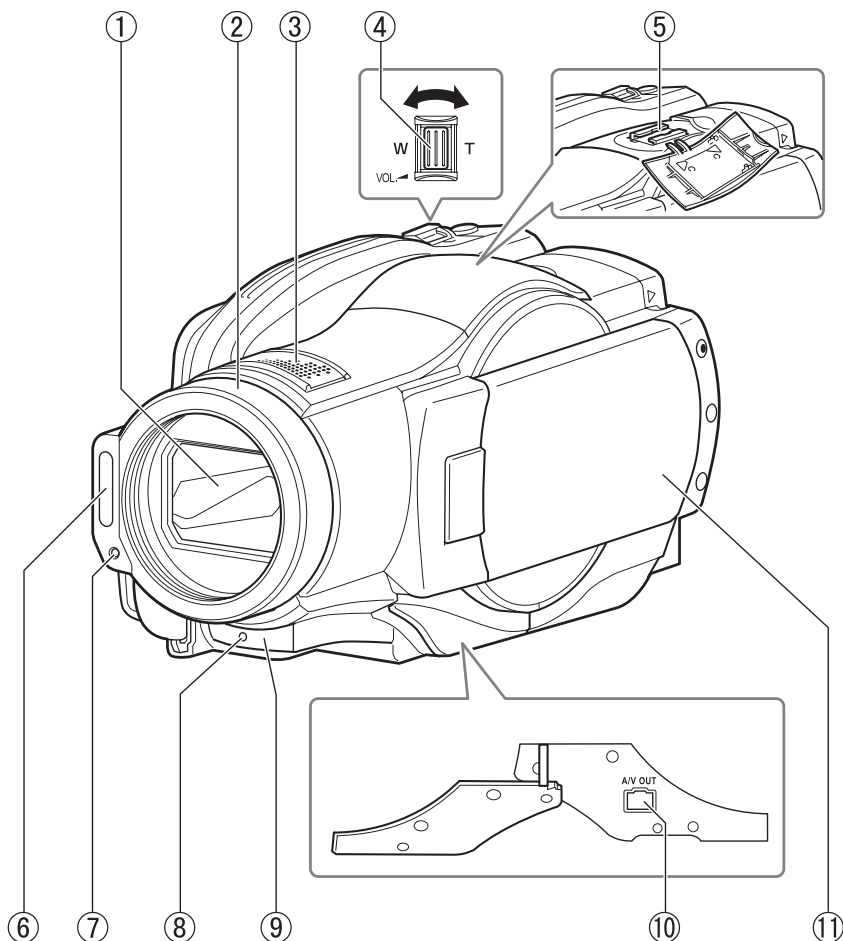
⑭ **SD card slot (p.28)**

⑮ **HDMI OUT terminal (p.115)**

⑯ **FINALIZE button (p.121)**

⑰ **FOCUS button (p.73)**

Lens side



① Automatic lens cover

The lens cover automatically opens when the power is turned on, revealing the optical 10x zoom lens.

② Lens hood

③ Stereo microphone

Do not block the microphone with your hand during recording.

④ Zoom lever (p.60, 70, 73)

⑤ Accessory shoe

⑥ Flash (p.82)

⑦ Light receiving sensor

Used to control flash amount. Do not block the light receiving sensor with your hand when recording still pictures.

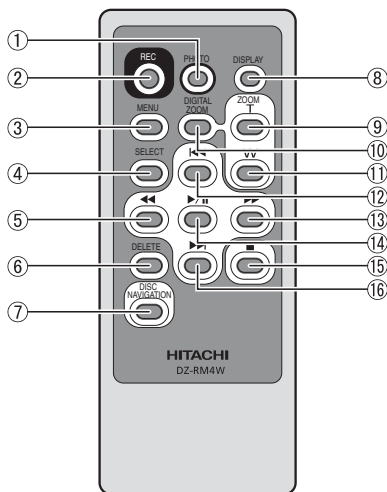
⑧ Recording indicator (p.48)

⑨ Remote control receiver/Infrared sensor

⑩ A/V OUT terminal (p.116)

⑪ LCD monitor (colour wide-screen)

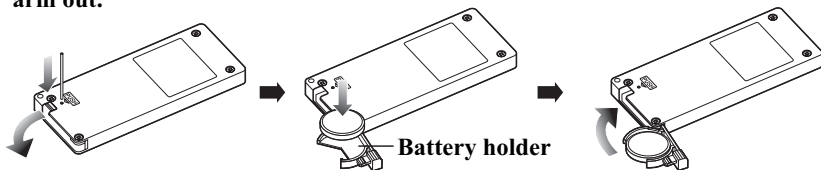
Remote control



- | | |
|---|---|
| ① PHOTO button (p.28) | ⑨ ZOOM T button (p.70) |
| ② REC button (p.26) | ⑩ DIGITAL ZOOM button (p.70) |
| ③ MENU button (p.25) | ⑪ ZOOM W button (p.70) |
| ④ SELECT button (p.55) | ⑫ ◀◀ (reverse skip) button (p.29, 62) |
| ⑤ ◀◀ (reverse search) button (p.29, 62) | ⑬ ▶▶ (forward search) button (p.29, 62) |
| ⑥ DELETE button (p.107) | ⑭ Confirmation button (p.29, 62) |
| ⑦ DISC NAVIGATION button (p.29) | ⑮ ■ (stop/cancel) button (p.55) |
| ⑧ DISPLAY button (p.50) | ⑯ ▶▶ (forward skip) button (p.29, 62) |

Inserting the supplied lithium battery into the remote control

- ① While inserting a thin tipped instrument (paperclip, etc.) into the hole marked PUSH, swing the battery holder arm out.
- ② Insert the lithium battery with the positive (+) terminal facing down.
- ③ Slide the cover to close it.



* For instructions on handling batteries, see p.19.

Warning

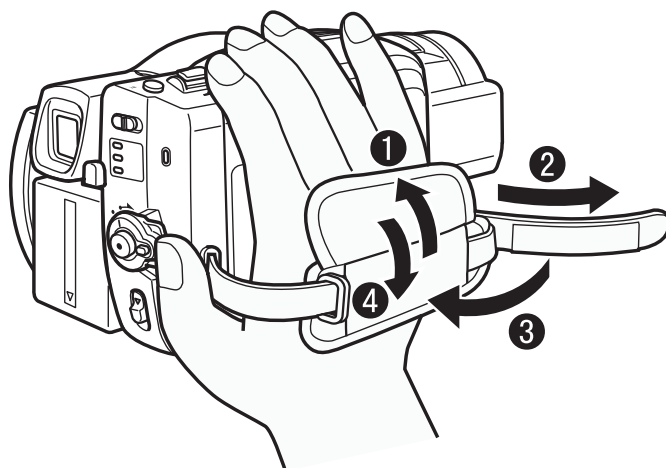
BATTERY MAY EXPLODE IF NOT HANDLED PROPERLY. DO NOT RECHARGE, DISASSEMBLE OR DISPOSE OF IN FIRE.

Note

Replace the battery with a Hitachi Maxell, Sony, Panasonic, Sanyo, Toshiba CR2032, or Duracell DL2032. Use of another battery may present a risk of fire or explosion.

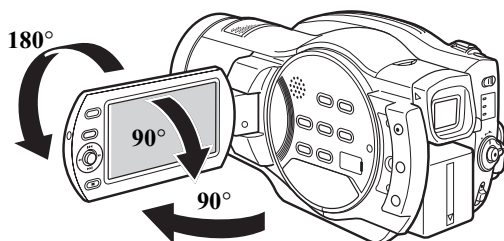
Adjusting the hand strap

Fasten the hand strap according to the procedure in the diagram.



- ❶ Flip the cover.
- ❷ Flip the belt.
- ❸ Replace the belt.
- ❹ Replace the cover.

How to Open and Use the LCD Monitor



You can use the LCD monitor as follows.

Recording high places above your line of sight



Basic posture

Hold the camcorder with both hands and tuck your elbows to your chest or sides, and move the camcorder at a gentle pace. This will allow you to record effectively without blurring.

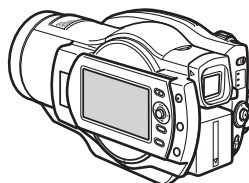
To record yourself (p.21)



Effortlessly record small children or pets at their line of sight



When playing back, etc.



- For LCD/EVF settings, see p.66–68. For instructions on how to operate the menu, see p.65.
- Using the viewfinder is convenient when it is difficult to see using the LCD monitor while recording in bright outdoor conditions (p.21).

About the LCD monitor display when recording yourself (the lens and LCD monitor are facing you)

- The LCD monitor displays a mirror image of the subject.
- You can check the image in the viewfinder. (You can also set the viewfinder to “On” at all times, regardless of the orientation of the LCD monitor (p.65–68).)
- The remaining battery charge indicator will only appear when battery power is almost gone. The battery charge indicator flashes red in this case.
- A warning message will not be displayed (p.140). You can confirm the warning message by rotating the LCD monitor 180° back to its normal orientation.
- When the LCD monitor is in this position, you can also use the LCD monitor as a light source when recording in dark locations (Assist Light, p.77).

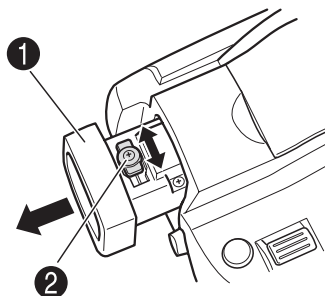
Recording/Playing Using the Viewfinder

You can use the viewfinder when the LCD monitor is closed or during mirror image recording.

To set the viewfinder to “On” at all times regardless of the orientation of the LCD monitor, or to adjust the brightness or colour density, see "How to use the LCD/EVF setup and initial setup" (p.68).

How to use the viewfinder

- 1 Pull out the viewfinder until it clicks.
- 2 Slide the dioptre control knob to adjust the focus to suit your eyesight.



Note

Focusing will not be correct unless the viewfinder is pulled fully out.

Using the CD manual

The instruction manuals for this product are written into the included CD-ROM. Before using the CD-ROM, please read the following to ensure proper use.

■ System requirements

Windows

- OS: Windows® 2000 Professional SP3 or higher
Windows® XP Home Edition
Windows® XP Professional Edition
Windows Vista™
- Computer: IBM® PC/AT® compatible, with the above OS preinstalled.
- CPU: Intel® Pentium® III or equivalent processor
- Memory: At least 256 MB (512 MB or more is recommended)
- Drive: CD-ROM drive
- Applications: Microsoft Internet Explorer 6.0 or later and
Adobe Reader 6.0 or later.
- Display: Displayable with at least 1024 x 768 pixels

Macintosh

- OS: Mac OS X v10.3.9, v10.4.2-v10.4.8
- CPU: PowerPC G4, PowerPC G5, Intel Core
- Memory: At least 256 MB (512 MB or more is recommended)
- HDD: Free space: Approx. 170 MB
- Drive: CD-ROM drive
- Applications: Safari and Adobe Reader 6.0 or later.
- Display: Displayable with at least 1024 x 768 pixels

■ How to use the CD

1. Insert CD into PC's CD-ROM drive.

Windows: Web browser will automatically start and Start up window will appear.

Macintosh: (1) Double-click on the CD-ROM icon on the desktop screen.

- (2) When "main.html" file is clicked, Web browser will start and Initial window will appear.

2. Click the language you want from the displayed list. The instruction manual will open.

Caution

Use the CD-ROM only in a computer CD drive. The CD-ROM is designed for PC use only. NEVER INSERT THE CD-ROM INTO A NON-COMPUTER CD PLAYER! Inserting the CD-ROM into an incompatible CD drive may produce a loud noise, which in turn MAY RESULT IN EAR AND SPEAKER DAMAGE!

- After using CD-ROM, please put it into CD case and keep it. Keep the CD neither in direct sunlight nor in a high temperature or high humidity environment.

Notes

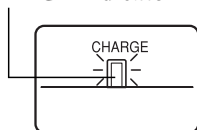
- The information in the CD-ROM is subject to change without notice.
- We accept no responsibility for any obstacle or defect to hardware and/or software of your PC as a result of the use of the CD-ROM.
- No part of the information in the CD-ROM or the CD-ROM in entirety can be copied, reproduced or republished without notice to our company.

Preparing

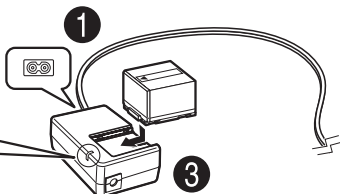
■ Setting up the battery pack

- ① Connect the mains lead to the AC adapter/charger.
- ② Plug in the mains lead to the mains.
- ③ Attach the battery pack to the AC adapter/charger.
- ④ Attach the battery pack to the camcorder.

CHARGE indicator



If the CHARGE indicator does not light, check that the connections (①, ②, ③) are firmly connected.

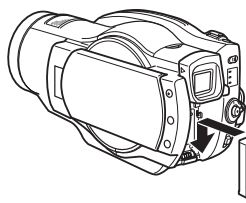


➔ To the mains*

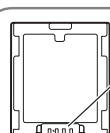
* The shape of plug varies depending on the model.

Note

Charging will not occur if the DC power cord is connected.



④



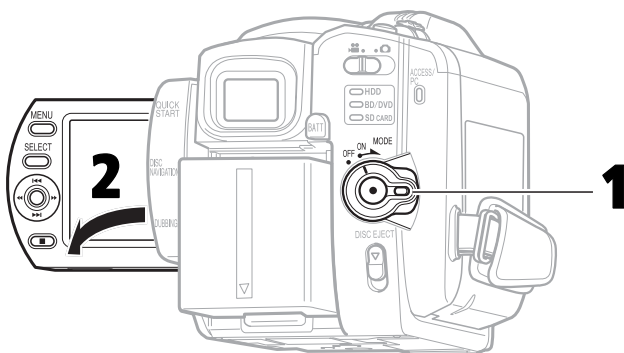
Terminal at bottom

● Charge status of the battery pack

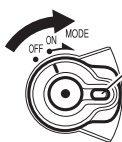
The CHARGE indicator of the AC adapter/charger allows you to check on the charge status of the battery pack.

Charge Status	CHARGE indicator
During charge	lit
Charge complete	Unlit

■ Turning on the Power

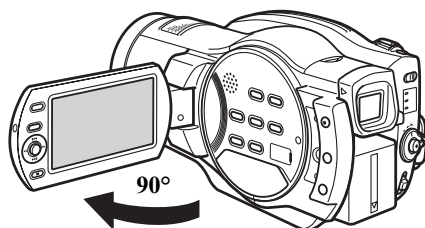


- 1 Turn on the power.



Press and hold the lock button, and turn the power switch to "ON".

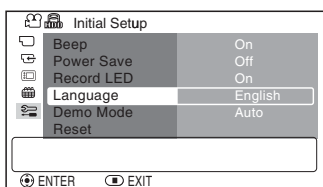
- 2 Open the LCD monitor.



■ Changing the display language

You can change the language used on screens and menus as follows.

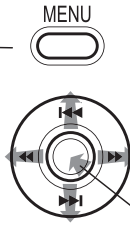
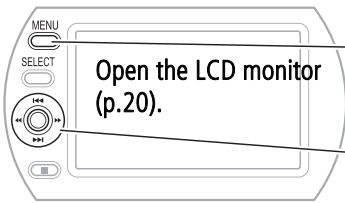
- 1 Press **MENU**, then select "Initial Setup" using the joystick.



- 2 Select "Language" using the joystick.

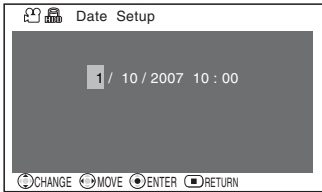
- 3 Choose the desired language using the joystick, then press the confirmation button.

■ Setting the date and time



- 1 Press **MENU**.
- 2 Select "Date Setup", then "Date Set" using the joystick. (For instructions on how to use the joystick, see p.29.)

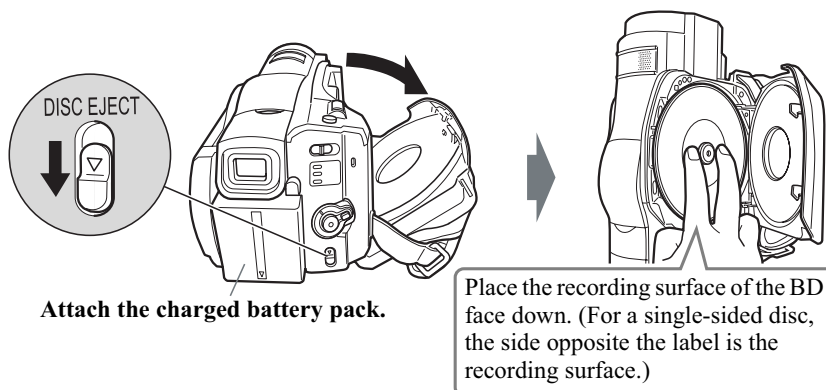
The confirmation button (press firmly)



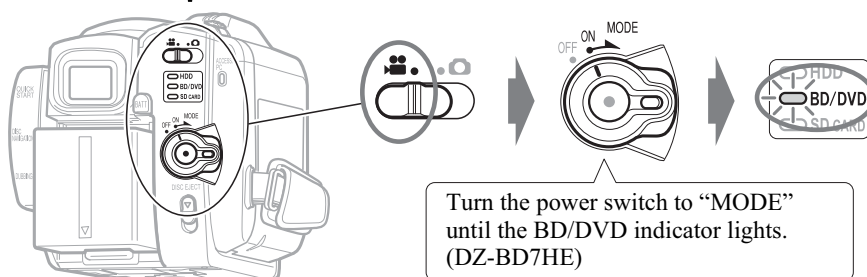
- 3 Set the date, month, year, hour, and minute using the joystick, and then press the confirmation button.
- 4 The set time and date appear in the LCD monitor.

Recording Movies to a BD

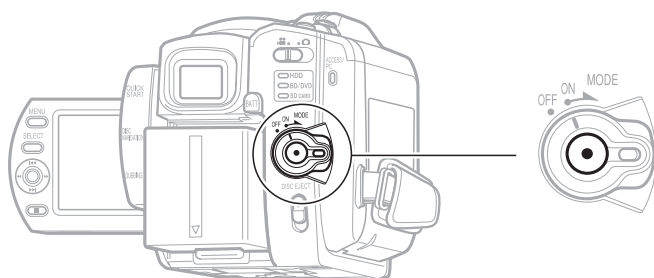
1 Insert a BD.



2 Turn the power switch to "ON".



3 Press the record button.

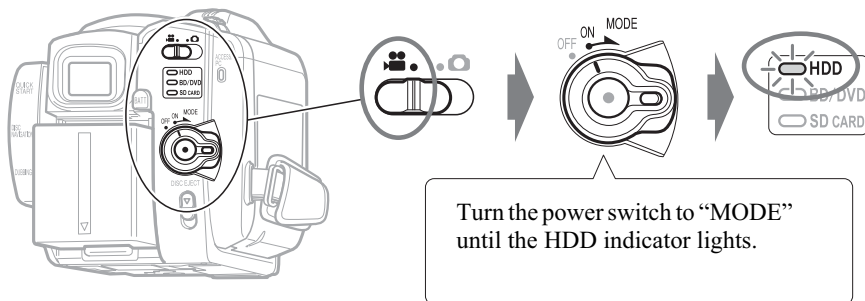


Recording begins.

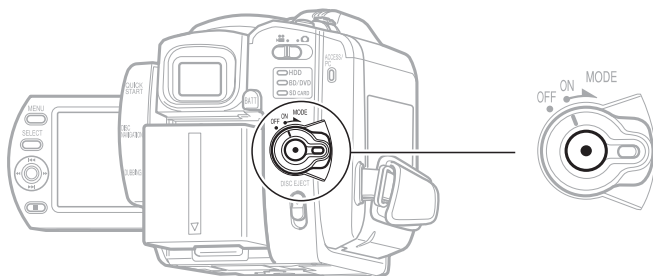
To pause recording, press the record button again.

Recording Movies to the HDD (DZ-BD7HE)

- 1 Turn the power switch to "ON".



- 2 Press the record button.

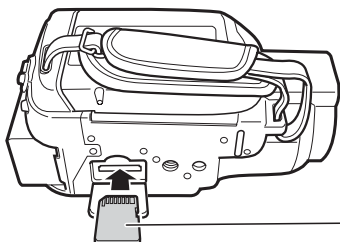


Recording begins.

To pause recording, press the record button again.

Recording Stills to an SD card

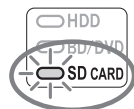
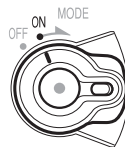
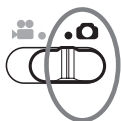
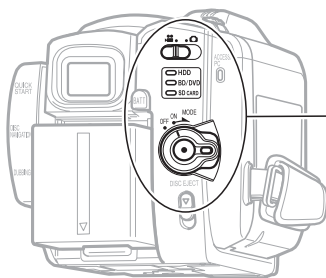
1 Insert an SD card.



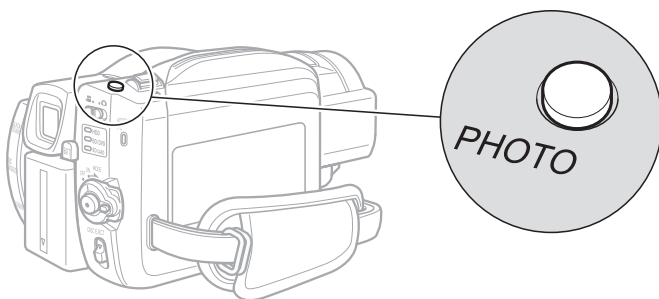
Pay attention to the orientation of the card. The terminals should face away from the LCD monitor.

For usable card types, see p.40.

2 Turn the power switch to "ON".



3 Press PHOTO.

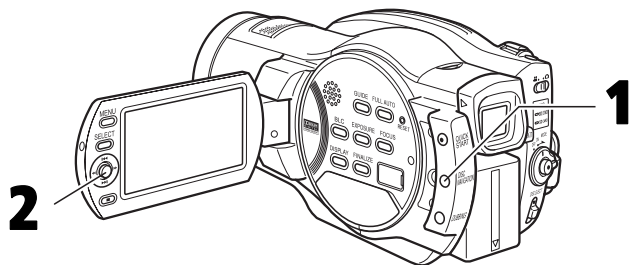


Press **PHOTO** halfway down so that a subject in the centre of the screen is focused.

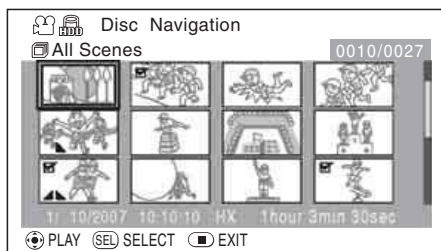
Fully press **PHOTO** to record.

Single press of the **PHOTO** button of the remote control enables focusing and recording at the same time.

Playing Recorded Movies/Stills



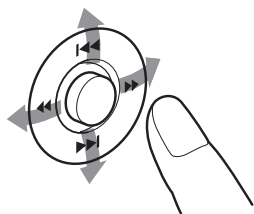
- 1** Press **DISC NAVIGATION**.
- 2** Choose a scene (movie/still), then press the confirmation button.



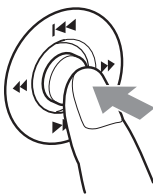
The chosen scene is played.

Hint

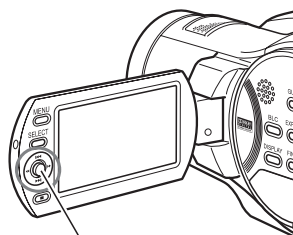
To select an item or scene (movie or still), move the joystick up, down, left, or right. To confirm a selection, press the confirmation button (press down on the centre of the joystick).



Select
by pressing up/down, left/
right



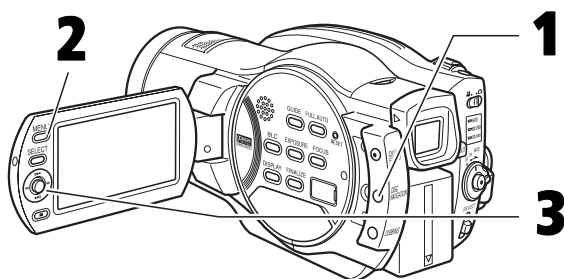
Confirm
by pressing down on
the centre



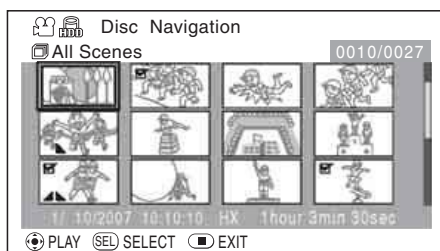
Joystick

See p.117 for the instructions on viewing the recordings on your TV screen.

Deleting Recorded Movies/Stills

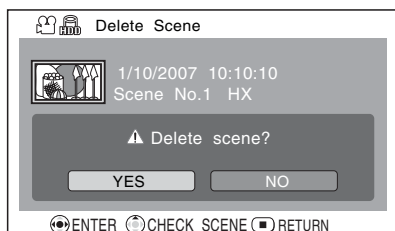


- 1** Press **DISC NAVIGATION**.
- 2** Select a scene you want to delete, then press **MENU**.



You can choose multiple scenes by selecting another scene and pressing **SELECT**.

- 3** Select **"Scene"** ▶ **"Edit"** ▶ **"Delete"**, and then press the confirmation button.
- 4** Select **"Yes"**, then press the confirmation button.



The selected scene is deleted.

- Scenes on BD-R/DVD-RW (VF mode)/DVD-R/+RW discs cannot be deleted.
- Only the latest scene can be deleted (+RW).

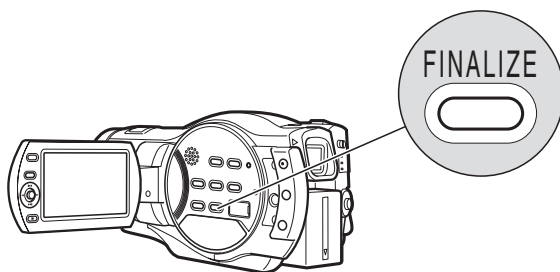
Finalising BD-R/DVD-RW/DVD-R/+RW

It is necessary to “finalise” before you use other BD/DVD players to play back a BD-R, DVD-RW, DVD-R, or +RW recorded on this camcorder.

Be sure to use the AC adapter/charger to power the camcorder when finalising a BD-R/DVD-RW/DVD-R/+RW.

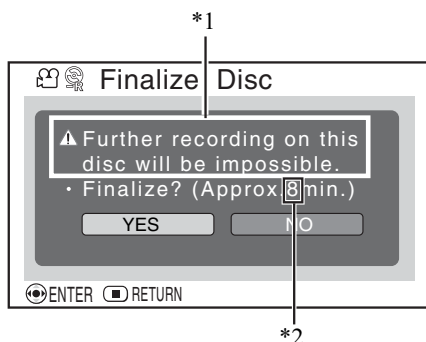
Finalisation cannot be executed using a battery. If the camcorder is turned off during finalisation and the finalisation is interrupted, incorrect finalisation will result, and at worst, the disc may be damaged.

- 1 Press **FINALIZE** during recording pause.



- 2 Choose “YES”, and then press the confirmation button.

The message showing that the disc is being finalised will appear, and the disc will then be finalised.

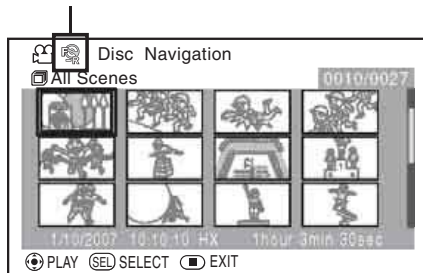


- *1 Displayed only when a BD-R/DVD-R is used.
- *2 Will vary depending on remaining time.

- 3 When finalisation is complete, an icon with "F" will appear on the Disc Navigation screen.

"F" will appear on the Disc Navigation screen for a finalised disc.

Finalised disc



Note

Do not use any other device to finalise a disc recorded on this camcorder.

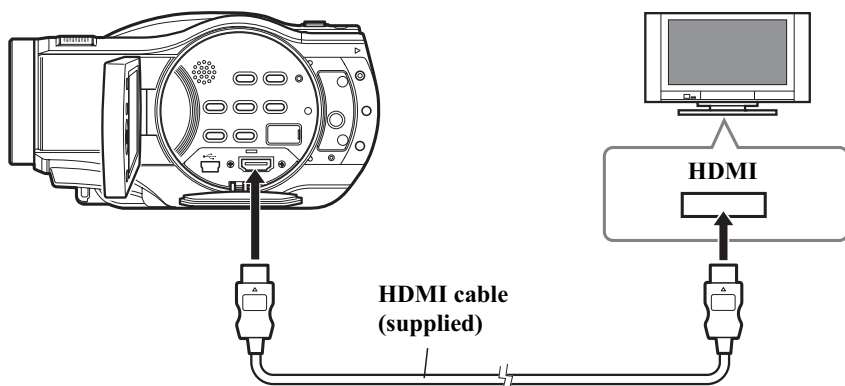
Connecting to a TV

The connection method differs depending on the type of video input terminal that your TV is equipped with. Connection methods in order of best image quality are as follows:

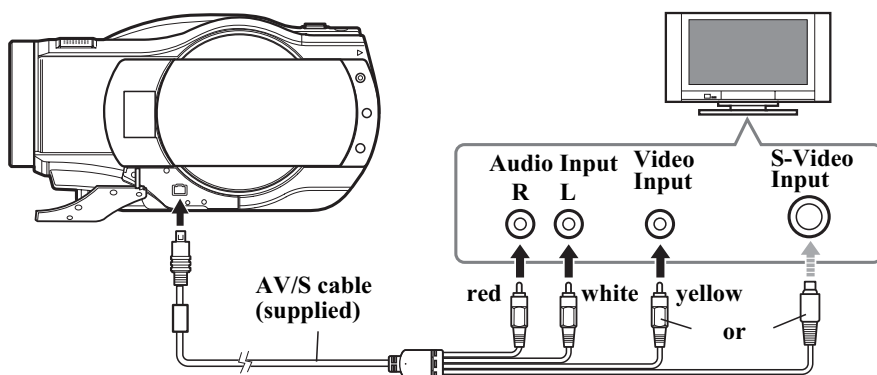
HDMI terminal → **S-Video terminal** → **Video terminal**

For viewing HD image quality, connecting to the high definition TV

The HDMI connection provides the highest quality digital image and sound signals to your TV through a single cable, without degradation.



For viewing SD image quality, connecting to the non-high-definition TV



* Do not connect anything to the camcorder's HDMI OUT terminal.

Viewing on your TV

- 1 Turn on the TV and switch the TV input to the terminal where the camcorder is connected.
 - Refer to your TV's operation manual on how to switch the TV input.
- 2 Turn on the camcorder.


Dubbing on a BD/DVD (DZ-BD7HE)

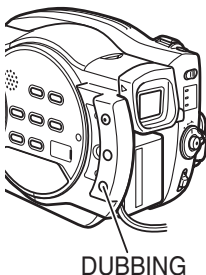
Transferring scenes recorded on the HDD to a BD/DVD by selecting the following options:

- “New” From all scenes recorded on the HDD, the scenes which are not dubbed yet to a BD/DVD will be dubbed from the beginning.
- “Date” Dubs all scenes recorded on the HDD on the same date to a BD/DVD, beginning with the first scene.
- “All” Dubs all scenes recorded on the HDD to a BD/DVD, beginning with the first scene.
- “Select” ... You can select your favorite scenes from all those recorded on the HDD, for dubbing.

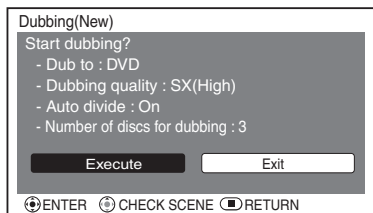
Be sure to use the AC adapter/charger to power the camcorder during dubbing. Dubbing is not possible with a battery pack connected. If power is turned off and dubbing is interrupted midway, proper dubbing will not be possible, and a BD/DVD may be damaged.

As an example, the following explains “New (latest) Dubbing”.

- 1 Set the Movie/Stills switch to .
- 2 Press and hold the lock button, and turn the power switch to “MODE” until the HDD indicator lights.
- 3 Press **DUBBING**.
- 4 Select “New” on the Dubbing Menu, then press the confirmation button.
Select BD or DVD by following the on-screen instructions and then insert the disc.



- 5 Select "With auto divide" or "No auto divide", then press the confirmation button.
- 6 Select "Execute" on the confirmation screen, then press the confirmation button.



- 7 If necessary, insert another BD or DVD.

If the BD/DVD does not have enough space for dubbing, a message appears on screen for you to insert another disc to continue.

- 8 Be sure to check the confirmation screen for deleting scenes after dubbing.
To delete the dubbed scenes from the HDD, select "Yes".
To preserve the dubbed scenes, select "No".
- 9 Remove the BD/DVD by pressing the DISC EJECT switch.
- 10 Close the lid of the BD/DVD compartment.

Hint

☒ is displayed on the thumbnail of the scene that is dubbed.

You need to finalise the BD/DVD to play it back on other BD/DVD recorders/players.

Functions and Characteristics of HDD/BD/DVD/Cards

The following table lists the storage media (discs and cards) and available functions that can be used with this camcorder.

Function ●: Functions available —: Not available	Media								
	Built-in HDD	BD		DVD					SD card
		-RE	-R	-RAM	-RW (VR mode)	-RW (VF mode)	-R	+RW	
Recording HD (Hi-Vision) quality movies (p.47)	●	●	●	—	—	—	—	—	—
Recording SD quality movies (p.47)	—	—	—	●	●	●	●	●	—
Recording stills (p.53)	—	—	—	—	—	—	—	—	●
Deleting recordings (p.107)	●	●	—	●	●	—	—	●*1	●
Editing recordings (p.96)	●	●	—	●	●	—	—	—	—
Playing on other BD/DVD players/recorders (p.118)	—	●*2	●*2 *3	●*2	●*2 *3	●*3	●*3	●*3	—
Initialising and reusing (p.112)	●	●	—	●	●	●	—	●	●
Making additional recordings after a disc is finalised (p.122)	●*4	●*4	—	●*4	●	●*5	—	●*5	●*4
Copying recordings onto a PC (p.123)	●*6	●*6	●*6 *7	●*6	●*6 *7	●*6 *7	●*6 *7	●*6 *7	●
Making HD (Hi-Vision) quality discs using a PC	—	●*6 *8	●*6 *8	—	—	—	—	—	—
Making SD quality discs using a PC	—	—	—	●*6 *9	●*6 *9	●*6 *10	●*6 *10	—	—

*1 Only the latest scene can be deleted.

*2 Not playable on some devices.

Playback is possible using a device which complies with the medium type.

*3 Must be finalised. Not playable on some devices.

*4 As finalising is unnecessary (cannot be performed), additional recordings are possible at any time.

*5 To make additional recordings, the finalised disc must be unfinalised.

*6 The provided software is used.







*7 Finalise the disc to edit on a PC.

*8 A BD menu is not created.

*9 A DVD-VR disc can be created.

*10 A DVD video disc can be created.

■ About HDD/BD/DVD

Usable discs and their logos		Function
HDD (DZ-BD7HE)		Allows extensive high-definition movie recordings (approx. 4 hours in HX mode). Allows editing and deleting scenes.
BD-RE Ver. 2.1 7.5GB 2x (8 cm)		A rewritable disc on which high-definition movies can be repeatedly recorded. You can delete/edit the recorded movies.
BD-R Ver. 1.1 7.5GB 2x (8 cm)		A non-rewritable disc on which a high-definition movie can be recorded once. The recorded movie cannot be deleted or edited.
DVD-RAM Ver. 2.1 (8 cm)		Allows editing and deleting scenes.
DVD-RW 2x Ver. 1.1 (8 cm)		Allows editing and deleting scenes using the camcorder in VR mode. Does not allow editing or deleting scenes using the camcorder in VF mode, but provides higher compatibility with other DVD players.
DVD-R for General Ver. 2.0 (8 cm)		Provides compatibility with most DVD players. Does not allow editing and deleting scenes.
+RW Ver. 1.2 (8 cm)		Provides high compatibility with other DVD players but does not need to be finalised. Scenes can be deleted immediately after being recorded.

BD-R Ver. 1.2 7.5GB 2x (8 cm) disc which is not an LTH type can be used.

* The versions in the above chart refer to physical standard versions of discs.

Notes

- Hitachi Maxell single sided discs (HG type in the case of DVDs) have been confirmed to be compatible with this camcorder and are recommended. Take care not to dirty (including fingerprints) or scratch the surface of the discs when handling.
When using a double-sided disc, take great care with handling it. Using non-Hitachi Maxell discs may not allow the camcorder to deliver optimum performance.
- DVD housed in a square cartridge/caddy case or a round DVD holder cannot be used as is. The DVD must be removed from its case/holder before it can be used.

Note on BD-R/DVD-R

This camcorder writes control data to a disc in order to automatically make recording adjustments when first recording after:


- a disc is inserted, and
- the power is turned on while the disc is in the camcorder.

If there is not enough space on the control area of a disc, recording may not be possible even if the data space for recording movies is not full. To prevent this, avoid performing operations described above more than 99 times per disc.

Unusable Discs

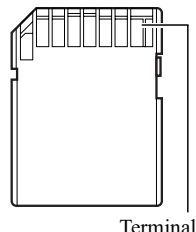
Dual layer BD and DVD discs, BD-R LTH type discs (Dye Type), +R, and HD-DVD.

■ About cards

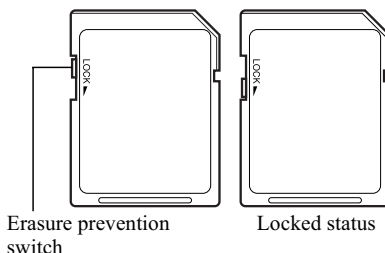
Usable card and logo		Function
SD memory card		Allows taking still pictures.

● Card Handling

- Do not use cards other than those specified.
- Be sure to perform trial recording before recording important images.
- Do not touch the card terminal or allow it to touch metal.
- Do not paste anything other than the designated label in the label area.
- Do not subject cards to impact, bending, or dropping.
- Do not disassemble or modify a card.
- Do not expose cards to water.
- Do not use or store cards in the following places:
 - Where the temperature is high, such as in a vehicle in the sun or near a heater
 - Where humidity is high, or in a dusty place
- When the erasure prevention switch is locked, recording, deletion, and editing are not allowed. Only playback is possible.



Terminal



Notes

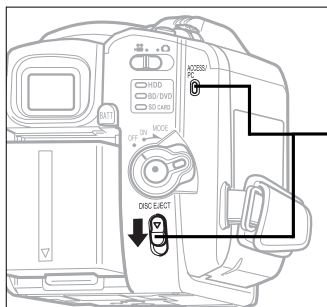
- SD memory cards can be used on this camcorder.
- When using an exclusive adapter, a miniSD memory card and micro SD memory card can be used in the same way as an SD memory card. No SDHC card or multimedia card can be used.

■ Cautions for discs and cards

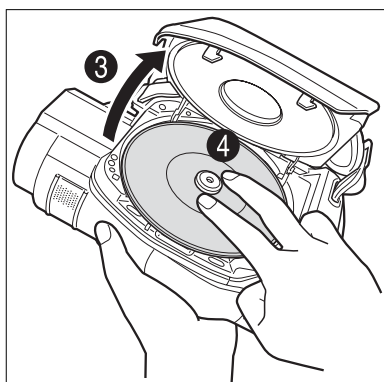
To prevent data loss or damage:

- Do not remove the battery and card while reading or writing data.
- Do not use the camcorder in a place subject to static electricity or electrical noise.
- Do not leave a disc unused in the camcorder for an extended period of long time.

■ Inserting a BD or DVD



- ❶ Attach the charged battery pack to the camcorder or connect the camcorder to the mains.
- ❷ Turn the power switch to "OFF". Then, press down the DISC EJECT switch until the ACCESS/PC indicator lights, then release.



- ❸ After several seconds, the lid pops open. Open it fully with your hand.
- ❹ Place the recording surface of the BD/DVD face down, then push down on the centre of the BD/DVD until it clicks into place.
 - For single-sided discs, the side opposite the label is the recording surface.
 - To record on the other side for double-sided discs, remove the disc (p.42), flip it over, and reload it.

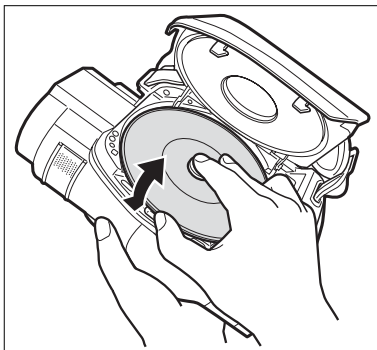
- ❺ Close the lid.

The ACCESS/PC indicator flashes. During this process, do not remove the power source, shake, or subject the camcorder to impacts.

- ❻ When a new BD-RE, BD-R, DVD-RW, or +RW is inserted, see p.43.

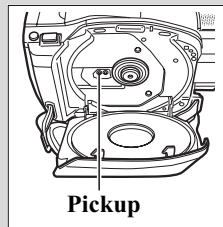
Removing the disc

Pressing slightly on the centre hub with a finger, grip the edge of the disc by your thumb and lift the disc out as shown.



Notes

- The disc mechanism will be very hot immediately after use. Do not touch the metallic areas.
- Do not peer into the pickup. Doing so may cause damage to your eyesight.
- To prevent malfunction, never do any of the following:
 - touch the pickup
 - insert a disc that is not compatible with the camcorder (p.38, 39)
 - close the lid before setting the disc securely into place
- The power automatically turns off if the lid is left open for approx. three minutes.
- The lid will not open if the camcorder is not connected to a power source.



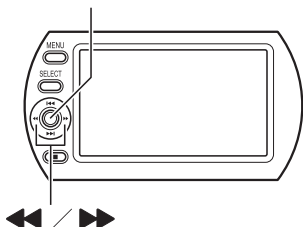
Pickup

■ When loading a new BD-RE/BD-R/DVD-RW/+RW

The disc must be formatted before it can be used for recording. When the disc is loaded, the format confirmation screen will appear in the LCD monitor. Format the disc according to the procedure below.

- 1 Open the LCD monitor.

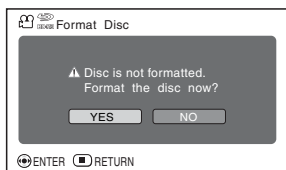
The confirmation button



Note

Be careful that the power is not accidentally cut off during formatting. Otherwise, the disc will become unusable.

- 2 Select "YES" by pressing ◀◀, then press the confirmation button.



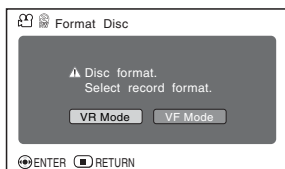
When using a BD-RE/BD-R/+RW
Formatting will start. Skip step 3.

When using a DVD-RW
Proceed to step 3.

- 3 (When using a DVD-RW)

The recording format selection screen appears.

Select "VR Mode" or "VF Mode" by pressing ◀◀▶▶, then press the confirmation button.



VR Mode

After recording, you can perform various editing functions such as choosing and deleting scenes. You can play back the disc in a device which supports 8 cm DVD-RW (VR Mode) after finalising the disc.

VF Mode (Video mode)

Although editing cannot be done on the camcorder, you can play back the disc on other DVD devices after finalising the disc.

■ CHARGE lamp status and charging time

Lights	Charging	Approx. charging time (at approx. 25°C)	
Goes out	Charge Complete	DZ-BP14S (supplied)	165 mins
		DZ-BP14SW (separately sold)	
		DZ-BP21SW (separately sold)	235 mins
Blinks	See "Troubleshooting" (p.148).		

■ Continuous recording time with a fully charged battery

Use the following table to estimate continuous recording times (minutes) using a fully charged battery pack.

Battery type	Monitor type	Continuous recording				Normal use* ¹			
		Viewfinder		LCD monitor		Viewfinder		LCD monitor	
	Recording media	HDD* ²	BD/DVD	HDD* ²	BD/DVD	HDD* ²	BD/DVD	HDD* ²	BD/DVD
DZ-BP14S (supplied) DZ-BP14SW (separately sold)		100	90	95	80	50	45	45	40
DZ-BP21SW (separately sold)		150	135	140	120	75	65	70	60

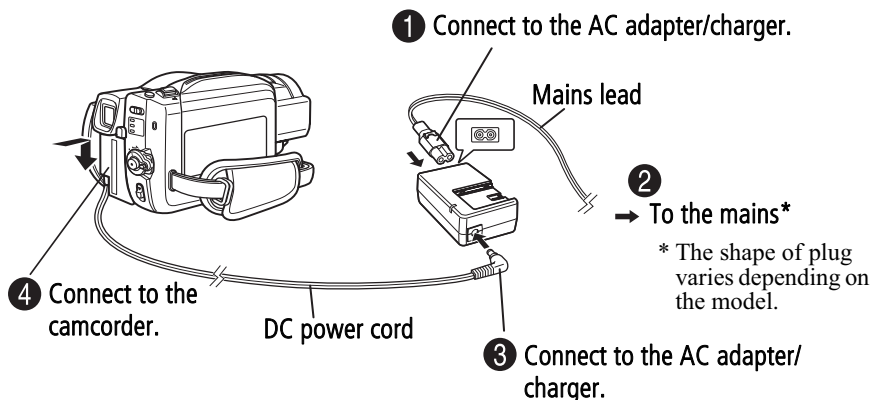
*1 Recordable time when zoom, focus, and switch changes are operated.

*2 For DZ-BD7HE only.

Notes

- In low temperature environments, recording time will be shortened.
- The times indicated in the table are estimates, and will change depending on actual recording conditions.

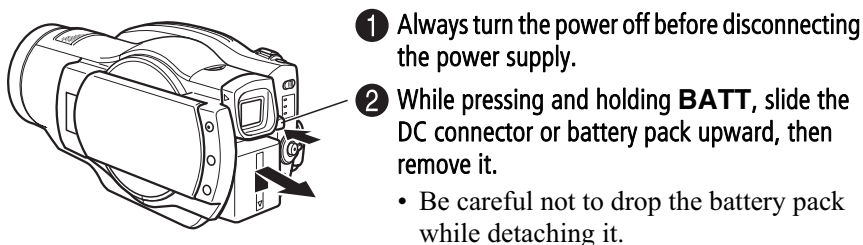
■ Connecting the camcorder to the mains



Note

The battery pack will not be charged while the DC power cord is connected to the AC adapter/charger even if the battery pack is attached to the AC adapter/charger.

■ Detaching the DC mains lead/battery pack from the camcorder



■ Efficient Use of the Battery

- The battery will slightly discharge even if it is detached from the camcorder.
- If the battery is left attached to the camcorder, it will consume a slight amount of power. Therefore, it is recommended that you charge the battery a day before using the camcorder.

When you intend not to use the camcorder for an extended period of time

It is recommended that you fully charge the battery at least once a year, attach it to the camcorder, turn it on and fully deplete the battery charge, then remove the battery and store it in a cool place again.

Battery life

The battery life varies greatly depending on the ambient environment and how often the camcorder is used. If the usable time of the camcorder with a fully charged battery is noticeably short, the battery should be replaced. Purchase a new one.

Power Save function

To save power, do not leave the camcorder in recording pause mode for too long. Even during recording pause, battery power is consumed at about the same level as during recording.

By turning the power save function On, the camcorder will automatically turn off if left idle for approximately five minutes in recording pause mode. For power save function, see "How to use the LCD/EVF setup and initial setup" (p.68).

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW

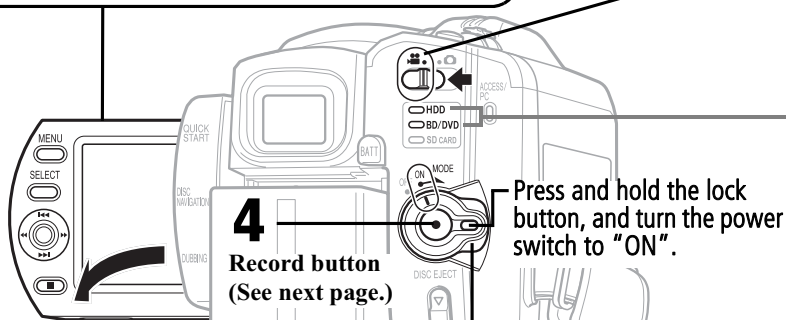
Recording Movies

DZ-BD7HE : You can choose either HDD or BD/DVD to record movies.

DZ-BD70E : You can record movies to BD/DVD.

1 Slide the Movie/Stills switch to "👤".

2 Open the LCD monitor.



3 Turn the power switch to "ON".

DZ-BD7HE

The HDD indicator lights and the camcorder enters recording pause mode. Movies will be recorded to the HDD.

To switch between HDD and BD/DVD, turn the power switch to "MODE" and release it.

The power switch will return to "ON" automatically. Each time you turn the switch to "MODE", the active function will alternate as follows:

HDD indicator lights ↔ BD/DVD indicator lights.

- Switch to "OFF", to turn off.

3 Turn the power switch to "ON".

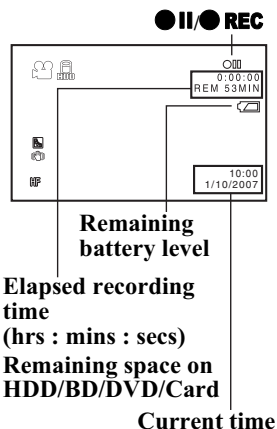
DZ-BD70E

The BD/DVD indicator lights and the camcorder enters recording pause mode.

- Switch to "OFF", to turn off.

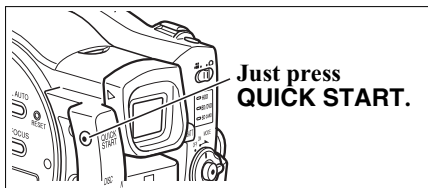
4 Press the record button.

- "●II" (recording pause) in the LCD monitor will change to "●REC" and recording will begin. The recording indicator beneath the lens (p.17) will also light red.
- To pause recording, press the record button again. The elapsed recording time will be reset to "0:00:00".
- To resume recording, press the record button again.




■ Using the Quick Start function

If you press **QUICK START**, the camcorder enters sleep mode and will keep battery consumption to a minimum (approx. half of the power consumed during recording) and you can restore recording pause mode quickly (about one second) by pressing **QUICK START** again. During sleep mode, the **QUICK START** button lights blue.



Hints

- You can switch the camcorder to stills recording mode by sliding the movie/stills switch to “” (p.53) even while the power is on.
- For details on screen displays during recording, see p.50.
- You can change the movie recording quality (p.84).
- If you cannot record movies, the camcorder does not operate, or it takes too long for recording to start, see “Troubleshooting” (p.148).
- About Sleep Mode
 - You can also return to recording pause mode from sleep mode by pressing the record button (press again to start recording) or changing the media.
 - When you return to recording pause mode from sleep mode, the zoom position (approx. 1x), manual focus, exposure, and backlight compensation will return to their default settings (p.70, 73–75).
 - Regardless of the power save setting (p.68), the camcorder power will automatically turn off if standby in sleep mode continues for approx. 30 minutes. In this case, first turn the power switch to “OFF”, then back to “ON”.
- If the automatic lens cover has stopped opening halfway, turn the power switch to “OFF”, then turn it to “ON” again.

Notes

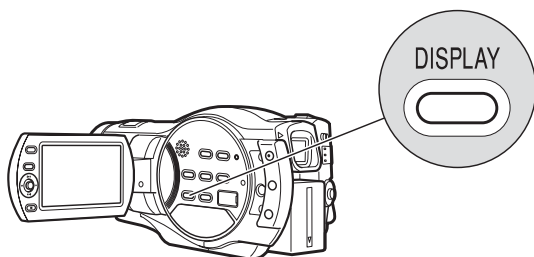
- The ACCESS/PC indicator is flashing for a while even after you finish recording. While the ACCESS/PC indicator is flashing, do not turn off the power or shake the camcorder. Doing so may cause an error in the recorded data and you may not be able to play back the data (p.160).
- The minimum recording time for movies is about three seconds (even if you press the record button before three recording seconds have elapsed).
- It may not be possible to deactivate the protection on a BD/DVD which was protected using another device. In this case, use that same device to deactivate the protection.

■ Information display during recording

Switching the display mode

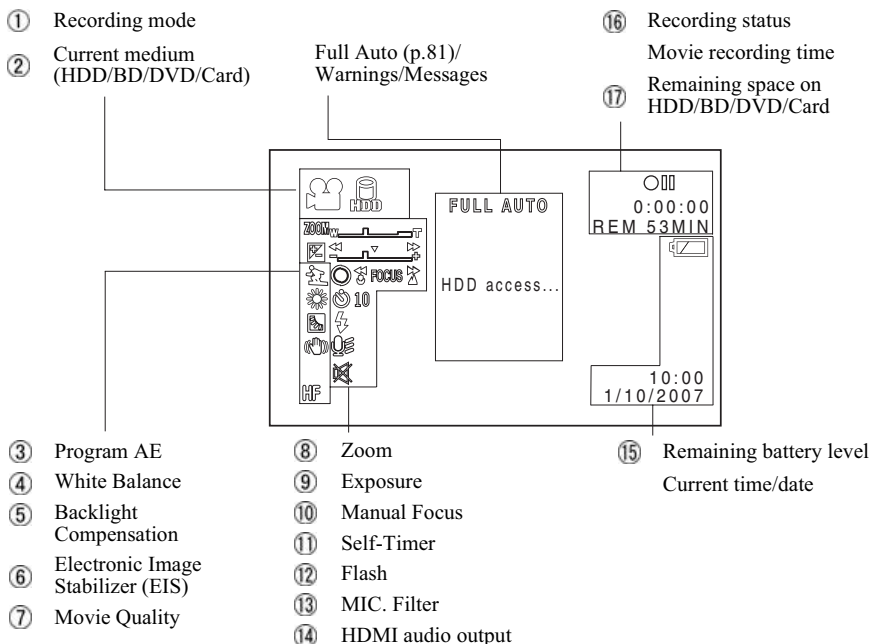
Various information will appear in the LCD monitor or the viewfinder during recording. You can choose simple display or detailed (all information) display by pressing **DISPLAY** repeatedly.

If you leave the camcorder idle for approx. one minute, the information display will disappear. To make the display reappear, press ■.





On-Screen Information

See the next page for details.























* The above display is for explanation and different from the actual display.

① Recording mode (p.26, 27, 28)

-  : Movie (HDD/BD/DVD)
-  : Stills (Card)

② Current medium and its status (p.37) (HDD/BD/DVD/Card)





-  : HDD
-  : Protected HDD
-
-  : BD-RE
-  : Protected BD-RE
-
-  : BD-R
-  : Finalised BD-R
-
-  : DVD-RAM
-  : Protected DVD-RAM
-
-  : DVD-RW (VR mode)
-  : Protected DVD-RW (VR mode)
-  : Finalised DVD-RW (VR mode)
-  : Protected Finalised DVD-RW (VR mode)
-
-  : DVD-RW (VF mode)
-  : Finalised DVD-RW (VF mode)
-
-  : DVD-R
-  : Finalised DVD-R
(finalised using this camcorder)
-  ^{*1} : DVD-R finalised using a device
other than the DZ-BD7HE/
DZ-BD70E.

DVD-R recorded using a
HITACHI camcorder marketed
before the DZ-BD7HE/
DZ-BD70E
-
-  : +RW
-  : Finalised +RW
-
-  : SD memory card




 : Locked SD memory card

No medium icon ^{*2}


③ Program AE (p.76)

- No icon : Auto
-  : Portrait
-  : Spotlight
-  : Sand & Snow
-  : Low light


④ White Balance (p.78)

- No icon : Auto
-  : Set
-  : Outdoors
-  : Indoors

⑤ Backlight Compensation (p.75)

- No icon : Off
-  : On

⑥ Electronic Image Stabiliser (EIS) (when using HDD/BD/DVD)

- No icon : Off
-  : On

⑦ HD movie recording quality (p.84) (when using HDD/BD)

- HX** : High quality
- HF** : Standard quality
- HS** : Extended recording

SD movie recording quality (p.84)
(when using DVD)

- SX** : High quality
- SF** : Standard quality

8 Zoom (p.70)



Digital zoom Off



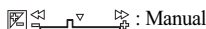
Digital zoom: 40x
(when using HDD/BD/DVD)



Digital zoom: 500x
(when using HDD/BD/DVD)

9 Exposure

No gauge : Auto



: Manual

10 Manual Focus

No gauge : Auto



: Manual

11 Self-Timer (when using Card)

No icon : Off



: On
(Ten-second countdown)

12 Flash (p.82) (when using Card)

No icon : Auto



: Flash On



: Flash Off

13 MIC. Filter

No icon : Off



: On

14 HDMI audio output (p.116)

In case of the HDMI connection, audio signals are output only while playback.

No icon : Audio signals are output.



: No audio signals are output.

15 Remaining battery level



Full

Almost empty

16 Recording status

: Recording

: Recording pause (lit green)
/Focus is locked (lit purple when using Card (recording stills))

No icon *3

17 Remaining space on HDD/BD/DVD/Card*4

REM XX HOURS XX MIN*5:

Remaining recordable time during movie recording (HDD/BD/DVD)

REM XX*6 : Number of remaining recordable still images during stills recording (Card)

*1 The icon of a disc which is recorded on a device other than the DZ-BD7HE/DZ-BD70E and can be played but not recordable on the DZ-BD7HE/DZ-BD70E lights orange.

*2 No icon appears when:
• no disc or card is inserted.
• an unusable disc or card is inserted.

*3 No icon appears when:
• no disc or card is inserted.
• a disc not formatted is loaded.
• the HDD is protected or a protected disc or locked card is loaded.
• the HDD, disc, or card has no remaining space.

*4 No remaining time or number will be displayed when a protected disc or locked card, or a finalised BD-R/DVD-RW (VF mode)/DVD-R/+RW disc is inserted.

*5 Recording times are estimates and will change depending on recording conditions.

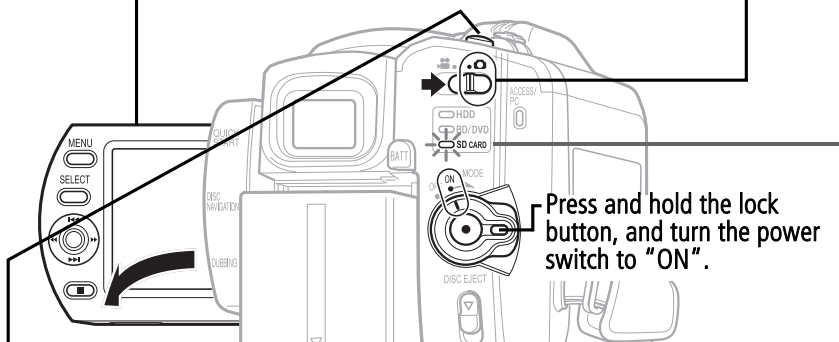
*6 The number of recordable stills is approximate. Depending on the recording conditions, the number may not decrease.

Recording Still Pictures

Still pictures are recorded on an SD Card.

1 Slide the Movie/Stills switch to "📷".

2 Open the LCD monitor.



Press and hold the lock button, and turn the power switch to "ON".

3 Turn the power switch to "ON".

The SD CARD indicator lights.

- Switch to "OFF", to turn off.

4 Press **PHOTO** halfway down.

A subject in the centre of the screen will be focused. When focus is locked, the green "●II" in the LCD monitor will turn purple.


5 Fully press **PHOTO**.

The image will be recorded. After a few seconds, the recorded image will be displayed for about three seconds. You can record the next photo when "●II" changes back to green.


Using the Quick Start function

See p.48

Hints

- You can switch the camcorder to movie recording mode by sliding the movie/stills switch to “” (p.47) even while the power is on.
- For details on screen displays during recording, see p.50.
- If you want to compose a shot in which the subject is not centred, first press **PHOTO** halfway with the subject centred in the monitor. Next, with the button pressed halfway, compose your shot and fully press **PHOTO**.
- If the camcorder has difficulty focusing, adjust the focus manually (p.73).
- Although it is possible to fully press **PHOTO** in a single action without pressing it halfway, the image may be out of focus.
- You can check the card capacity and number of remaining recordable pictures (p.178).
- If you are unable to record still pictures, see “Troubleshooting” (p.148).
- About Sleep Mode
 - You can also return to recording pause mode from sleep mode by pressing **PHOTO**. To record, you need to press **PHOTO** again.
 - When you return to pause mode from sleep mode, the zoom position (approx. 1x), manual focus, exposure, and backlight compensation will return to their default settings (p.70, 73–75).
 - Regardless of the power save setting (p.68), the camcorder power will automatically turn off if standby in sleep mode continues for approximately 30 minutes. In this case, first turn the power switch to “OFF”, then back to “ON”.
- If the automatic lens cover has stopped opening halfway, turn the power switch to “OFF”, then turn it to “ON” again.

Notes

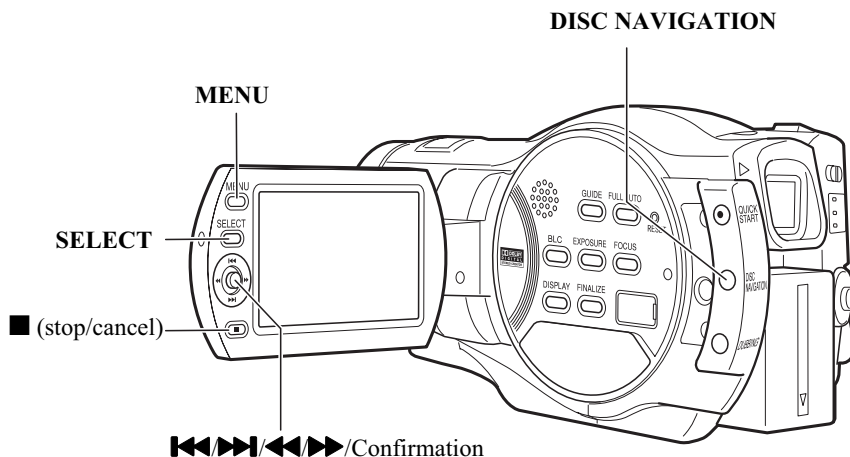
- After recording, do not turn off the power until “” lights green in the LCD monitor. Doing so may cause an error in the recorded data and you may not be able to play back the data (p.160).
- The recorded image may be blurred if camera shake occurs.
- Hold the camcorder with both hands and tuck your elbows to your chest or sides for best recording results.
- When recording with digital zoom, use a tripod for best results.
- The recorded image may differ slightly from the image in the LCD monitor or viewfinder.

Playback

(Watching Your Recordings)

Recorded movies and still pictures are referred to as “scenes”. For movies, a scene is one continuous uninterrupted recording, and for still images, a scene is one still picture.

Open the LCD monitor before starting playback.



HDD BD-RE BD-R RAM RW(VR) RW(VF) R RW CARD

■ Playing back the last recorded scene

You can play back the last recorded scene right away.

- 1 If the camcorder is not in recording pause mode, set the camcorder to recording pause mode for the medium you want to play back (p.47, p.53).
- 2 Press the confirmation button.

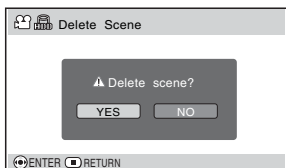
The scene recorded last will play back.

When playing back a movie, playback is paused after the final frame and “▶▶” (playback pause icon at the final frame) appears. If this condition continues for more than five minutes, the camcorder will automatically return to recording pause mode. To promptly return to recording pause mode, press ■.

HDD BD-RE RAM -RW(VR) +RW CARD

■ Deleting the last recorded scene

- 1 Play back the last recorded scene (see p.55).
- 2 Press **MENU**, then select "Edit" by pressing **▶▶/◀◀**.
- 3 Select "Edit" ▶ "Delete Scene", then press the confirmation button.



- 4 Select "YES" by pressing **◀◀**, then press the confirmation button.

The scene will be deleted.

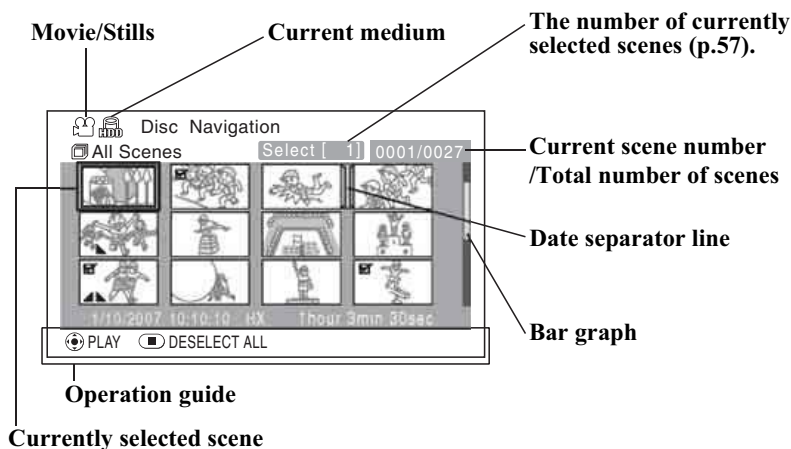
- To cancel deletion, select "NO" and press the confirmation button or simply press **■**.
- After deleting or cancelling deletion, the camcorder will return to recording pause mode.

HDD BD-RE BD-R RAM -RW(VR) -RW(VF) R +RW CARD

■ Choosing and playing back a scene

- 1 Press **DISC NAVIGATION** while the media you want to play back is in recording pause mode.

The scenes thumbnails appear on the disc navigation screen.



② Choose a scene by pressing **◀◀/▶▶** (up/down, previous page/following page) and **◀▶/▶▶** (left/right).

- Holding down the button will increase the scene selection speed. Use the “Current scene number/Total number of scenes” display and the bar graph as reference.

③ Press the confirmation button.

The chosen scene is played back.

Playback is paused at the final frame of the last scene, and “▶▶” (playback pause icon at the final frame) appears. When this condition continues for longer than five minutes, the display will automatically return to the disc navigation screen.

- To promptly return to the disc navigation screen, press **■** or **DISC NAVIGATION**.

To return to recording pause mode, press **■** or **DISC NAVIGATION** again.

- If you press the confirmation button while “▶▶” is displayed, playback starts from the first scene.

HDD BD-RE BD-R RAM RW(VR) RW(VF) R RW CARD

■ Choosing and playing back multiple scenes

After step ① of "Choosing and playing back a scene" (p.56), perform procedures according to your purpose from the table below. When you have finished choosing scenes, press the confirmation button to begin playing them back.

- You can utilise more than one method in the table below when choosing scenes.
- The colour of the frame(s) may change depending on your operations as follows:
 - **Yellow**: indicates your current position (cursor frame)
 - **Red**: indicates scenes already chosen
 - **Blue**: indicates the range of consecutive scenes being selected
 - **2-colour frame**: includes the meaning of both colours

Select multiple scenes individually	<p>① Select a scene by pressing ◀◀/▶▶/◀▶/▶▶, then press SELECT.</p> <p>② Repeat this step to choose the next scene.</p>
Using the current scene as your starting point, select multiple previous or succeeding consecutive scenes	<p>① Press and hold SELECT until the cursor frame becomes blue.</p> <p>② Choose a final scene by pressing ◀◀/▶▶/◀▶/▶▶, then press the confirmation button to confirm the setting.</p>

Select all scenes from the first scene to the current scene. (Menu option: Start→Current)	<ol style="list-style-type: none"> 1 Press MENU, select "Scene" by pressing ▶▶, then select "Select" by pressing ◀◀/▶▶. 2 Press ▶▶ or the confirmation button. 3 After choosing the desired option by pressing ◀◀/▶▶, press the confirmation button to confirm the setting.
Select all scenes from the current scene to the final scene. (Menu option: Current→End)	
Select all scenes on the media. (Menu option: All)	
Cancel operations while selecting the range (while a blue frame is displayed)	Press ■ .
Cancel selected scenes individually	Move the cursor frame (yellow) to a selected scene (red) you want to cancel and press SELECT .
Cancel all scenes selected	Press ■ .

HDD BD-RE BD-R RAM -RW (VR) -RW (VF) R +RW CARD

■ Jumping to the designated scene

- 1 Press **MENU** after step ③ of "Choosing and playing back a scene" (p.56)—while a scene is played back.

The menu appears.

- 2 Select "Go To" by pressing **◀◀/▶▶**, then press **▶▶**.
- 3 Select "Top", "End", or "Specify" by pressing **◀◀/▶▶**, then press the confirmation button to confirm.

Top: Goes to the beginning, then pauses playback.

End: Goes to the end, then pauses playback.

Specify: Goes to the specified point, then pauses playback.

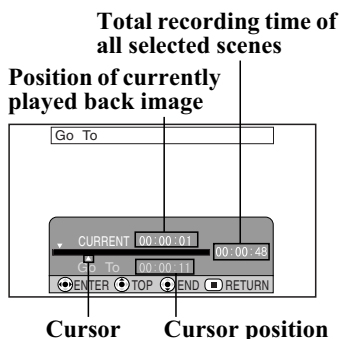
See next page on how to specify a point.

● Specifying the point to jump to

Select "Specify" in step ③ in "Jumping to the designated scene" (p.58), then press the confirmation button.

The specify screen will appear.

1



3

Press the confirmation button.

The camcorder will go to the specified point and enter playback pause mode.

- To start playback, press the confirmation button again.

Hints

- To cancel the "Go To" procedure midway, press **■** before going to the specified point.
- With a card, the number of stills will appear at the "Top", "Current", "End", and "Go To" indicators.

Note

The cursor position is a rough estimate. The cursor may not move at even intervals.

Select the desired point by time by pressing **⏮** / **⏭** / **⏪** / **⏩**.

⏮: To select the beginning

⏭: To select the end

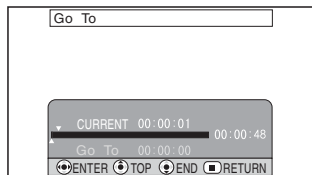
⏪ / **⏩** once:

To move the cursor one minute back or forward for HDD (ten seconds for DVD, one still for card)

Press and hold **⏪** / **⏩**:

To move the cursor in ten minutes increments for HDD (one minute for DVD, ten stills for card)

2



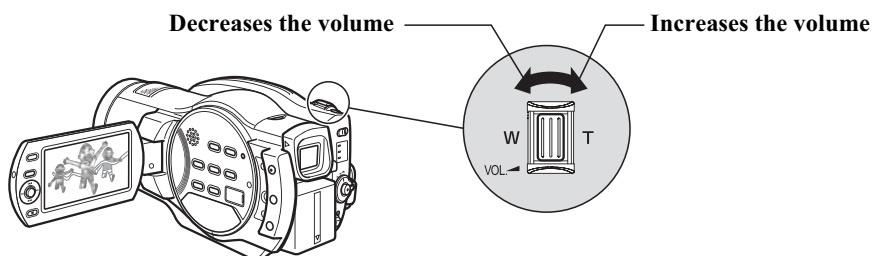
(When the start of the selected scene is selected)

Notes

- When you play a still image from a card, “Playback.” appears. If the image file is very large (high resolution, etc.), it will take more time to display.
- The disc navigation screen automatically appears if:
 - the HDD/BD/DVD is protected.
 - a finalised BD-R/DVD-RW (VF mode)/DVD-R/+RW is loaded.
 - a DVD-RW (VF mode)/DVD-R recorded on a Hitachi DVD camcorder other than this model is loaded.
- It may require more time to start playing back if many scenes are chosen.

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW

■ Adjusting speaker volume during movie playback



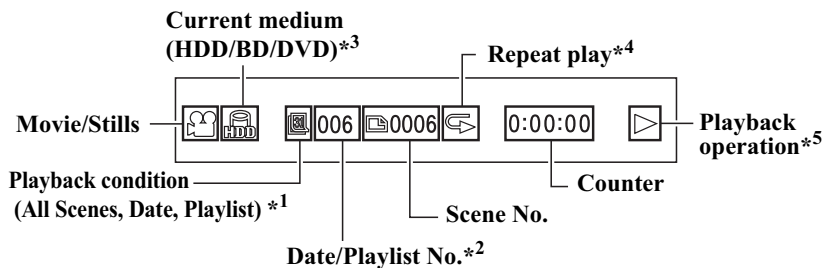
■ Information display during playback

Various types of information on recording will be superimposed on the playback image you are viewing.

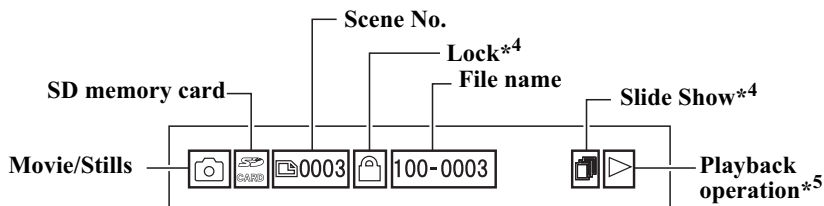
The display mode switched in the following way each time you press **DISPLAY**.



When using HDD/BD/DVD



When using Card



- *1 Playlist, Date, or All Scenes
- *2 Not displayed while playing All Scenes.
- *3 See “Current medium and its status (HDD/BD/DVD/Card)” on p.51.
- *4 Appears when set (see p.63, 64, 110).
- *5 There are following playback operations:
 - ▶: Standard playback
 - ⏏: Playback pause
 - ⏭: Forward search playback
 - ⏮: Reverse search playback
 - ⏭⏭: Forward skip playback
 - ⏮⏮: Reverse skip playback
 - ⏭⏭⏭: Forward frame advance
 - ⏮⏮⏮: Reverse frame back
 - ⏭⏭⏭⏭: Forward slow playback
 - ⏮⏮⏮⏮: Reverse slow playback

the following pages.

“⏮” appears after the first still or the first frame of the first movie is played when playing reverse.

“⏭” appears after the last still or the last frame of the last movie is played when playing forward.

For instructions on how to operate, see

■ Simple functions you can use during playback or playback pause

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW

Movies (during playback)

Functions	Press
Pause	The confirmation button
Fast-forward/Reverse	▶▶ (Forward)/◀◀ (Reverse) and hold
Skip forward/backward	▶▶▶ (Forward)/◀◀◀ (Reverse)

- If you press ◀◀◀ within a few seconds from the beginning of a scene, playback starts from the beginning of the previous scene.
- If you press ▶▶▶ while the last scene is playing back, playback is paused at the final frame of the last scene.

Continuous skipping	▶▶▶ (Forward)/◀◀◀ (Reverse) and hold
---------------------	--------------------------------------

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW

Movies (during playback pause)

The following functions will operate during playback pause in the same way as during playback. However, if the button is released, playback will return to playback pause.

- Fast-forward/Reverse
- Skipping
- Continuous skipping

The following functions only operate during playback pause.

Functions	Press
Frame by frame playback (forward/reverse)	▶▶ (Forward)/◀◀ (Reverse)

- No sound will be heard.
- Frames are advanced in intervals of approx. 0.03 seconds and reversed in intervals of approx. 0.5 seconds.

Slow playback (Forward/Reverse)	▶▶ (Forward)/◀◀ (Reverse) and hold
---------------------------------	------------------------------------

- No sound will be heard.
- Slow playback advances in intervals of approx. 0.03 seconds and reverses in intervals of approx. 0.5 seconds.

Continuous skipping	▶▶▶ (Forward)/◀◀◀ (Reverse) and hold
---------------------	--------------------------------------

Skips forward/backward continuously to the start of each scene. Release the button at the scene you wish to watch.

Notes

- If the temperature inside the camcorder gets too high, the camcorder may fail to function normally. Turn off the power and wait awhile before turning the power back on.
- In slow playback, images with fast-moving subjects may appear blurred.

CARD

Still pictures (during card playback)

Reminder: For still images, a “scene” is one still image, a photograph.

Functions	Press
Playing previous or later scenes (stills)	►►/►► (Forward)/ ◄◄/◄◄ (Reverse)

Each time you press ►►/►► or ◄◄/◄◄, the next or previous still is shown. If you continue pressing, stills are played back successively until you release the button, or the last/first scene is reached.

- For automatic playback for still pictures, use the slide show function.

CARD

■ Playing still pictures on a card automatically (Slide Show)

When you play back when the slide show is On, still pictures are played one after the other.

If the playback range of scenes has been specified, the slide show plays back this specified range of scenes.

- 1 Press **MENU** on the disc navigation screen (p.56).
- 2 Select “Playback Setting” by pressing ◄◄/►►, then press ►►.
- 3 Select “Slide Show” and press ►► to select “On”.
- 4 Press **MENU** to make the menu disappear and select a still picture (scene) from the disc navigation screen.

The slide show begins.

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW

■ Capturing a still picture from a movie (PHOTO Capture)

You can capture and record an image displayed during movie playback as a photo (approx. 2,070,000 pixels (HDD/BD)/approx. 230,000 pixels (DVD)), on a card.

- ① Press **PHOTO** or **MENU** at the frame you want to capture during movie playback or playback pause.
 - If you press **PHOTO**, go to step ④. If you press **MENU**, proceed to the next step.
- ② Select "Edit" by pressing **◀◀/▶▶**, then press **▶▶**.
- ③ If "Photo Capture" is not selected, select it by pressing **◀◀/▶▶**, then press the confirmation button.
- ④ Press **◀◀** to select "YES", then press the confirmation button to confirm.
 - To cancel capturing, either press the confirmation button while "NO" is selected or press **■**.
 - After capturing is complete or cancelled, the screen will return to playback pause.

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW

■ Playing back scenes repeatedly (Repeat Play)

When this function is On, all scenes will play back from the first scene to the last scene repeatedly.

If a range of scenes (or just one scene) is specified (p.57), playback of the specified scenes will be repeated.

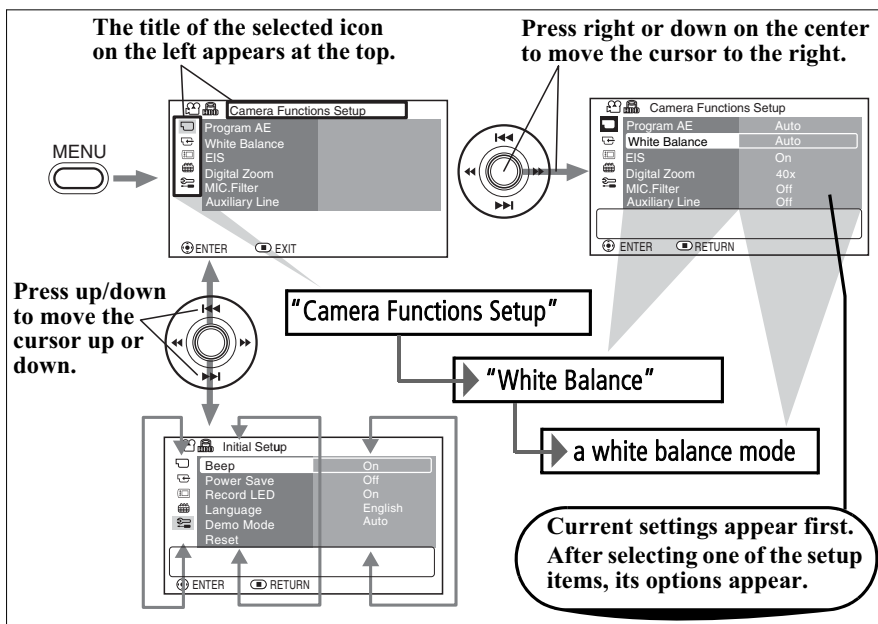
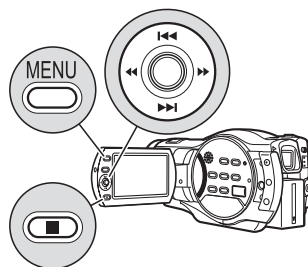
- ① Press **MENU** on the disc navigation screen (p.56).
- ② Select "Others" by pressing **◀◀/▶▶**, then press **▶▶**.
- ③ Select "Repeat Play" by pressing **◀◀/▶▶**, then press **▶▶**.
- ④ Select "On" by pressing **◀◀/▶▶**, then press the confirmation button to confirm the setting.
- ⑤ Press **MENU** to return to the disc navigation screen.
- ⑥ Press the confirmation button to begin playback.
 - To quit playback, press **■**. ("Repeat Play" remains "On".)
 - "Repeat Play" will be set to "Off" if:
 - you repeat the steps and select "Off" instead of "On" in step ④
 - turn off the power
 - remove the BD/DVD
 - Repeat playback will not function when you play the last scene when the camcorder is in recording pause mode.

How to Operate the Menu

1 Press **MENU**.

Example:

2 Select "Camera Functions Setup" ▶
"White Balance" ▶ a white balance mode



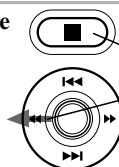
3 Press the confirmation button to confirm, then **MENU** to end.



* To quit without changing the setting, press **MENU** before pressing the confirmation button.

To cancel/exit and return to the previous stage

To go back left in the menu



These operations work almost the same way.

Menu (While Recording)

Movie menu

○ indicates the function can also be set from the stills menu.

Menu items (1st level)	Menu items (2nd level)	○	See
Camera Functions Setup	Program AE	○	p.76
	White Balance	○	p.78
	EIS		p.80
	Digital Zoom		p.70
	MIC. Filter		p.81
	Auxiliary Line	○	p.80
Record Functions Setup	HD Video Mode (when the HDD or a BD is used) SD Video Mode (when a DVD is used)		p.84
LCD/EVF Setup	LCD/EVF Adjust	○	p.68
	EVF Display	○	p.68
Date Setup	Date Set	○	p.25
	Date Mode	○	p.69
Initial Setup	Beep	○	p.68
	Power Save	○	p.68
	Record LED	○	p.83
	Language	○	p.24
	Demo Mode	○	p.69
	Reset	○	p.68

Stills menu

○ indicates the function can also be set from the movie menu.

Menu items (1st level)	Menu items (2nd level)	○	See
Camera Functions Setup	Program AE	○	p.76
	White Balance	○	p.78
	Flash		p.82
	Auxiliary Line	○	p.80
Record Functions Setup	Self Timer		p.85
LCD/EVF Setup	LCD/EVF Adjust	○	p.68
	EVF Display	○	p.68
Date Setup	Date Set	○	p.25
	Date Mode	○	p.69
Initial Setup	Beep	○	p.68
	Power Save	○	p.68
	Record LED	○	p.83
	Language	○	p.24
	Demo Mode	○	p.69
	Reset	○	p.68

■ How to use the LCD/EVF setup and initial setup

	Menu items	Explanation of functions		Initial Value
LCD/EVF Setup	LCD/EVF Adjust*	LCD Brightness	Adjusts the brightness of the LCD monitor.	–
		EVF Brightness	Adjusts the brightness of the viewfinder.	–
		Colour Level	Adjusts the colour density of the LCD monitor and viewfinder.	–
	EVF Display	If set to “On”, images always appear in the viewfinder regardless of the orientation of the LCD monitor.		Auto
Initial Setup	Beep	Select “Off” to turn off the beeps that sound when any button is pressed.		On
	Power Save	When set to “On”, the camcorder power will automatically turn off if it is left idle for approx. five minutes during recording pause mode. When set to “Off”, the camcorder does not turn off automatically except while in sleep mode.		Off
	Record LED	p.83		On
	Language	You can select the display language.		English
	Demo Mode	p.69		Auto
	Reset	Returns all menu settings to default.		–

* The viewfinder is always On while “LCD/EVF Adjust” is being set regardless of the setting of “EVF Display”.

Setting the Date and Time

See "Setting the date and time" (p.25) for setting procedures.

Note

The camcorder is equipped with a built-in rechargeable battery to retain the date and time in memory. If the built-in battery is depleted, the date and time will need to be reset. Periodically (once every six months) recharge the internal battery by connecting the camcorder to the mains or attaching a charged battery pack to the camcorder while leaving the camcorder turned off for 24 hours.

Changing the date format

You can change the date format to “M/D/Y” or “Y/M/D”.

- ❶ Press **MENU**.
- ❷ Select “Date Setup” ► “Date Mode” ► one of the date formats
- ❸ Press the confirmation button, then press **MENU** to exit the setup.

■ About the demonstration function

At time of purchase of this camcorder, this function is set to “Auto”.

A demonstration starts automatically when you connect the AC adapter/charger to the camcorder as a power source and leave the camcorder idle for more than approx. ten minutes, after turning on the power and set the camcorder to:

- HDD (DZ-BD7HE), or
- the medium (BD/DVD or SD memory card) which is not inserted in the camcorder.

To cancel the demonstration, press any one of the camcorder buttons.

Changing the demo mode setting or watching the demonstration now

- ❶ Press **MENU**.
- ❷ Select “Initial Setup” ► “Demo Mode” ► one of the following settings:
Auto: See above.
Off: Turns off the demonstration function.
Start: The demonstration will start right away. If you cancel the demonstration, the prior setting will be restored (“AUTO” or “OFF”).
- ❸ Press the confirmation button.

Notes

- If a battery pack is connected to the camcorder as a power source, the demonstration will not begin even if “Demo Mode” is set to “Auto”.
- The demonstration function does not work when the camcorder is connected to a PC.

HDD BD-RE BD-R RAM RW (VR) RW (VF) R +RW CARD

Magnified Recording (Optical Zoom and Digital Zoom)

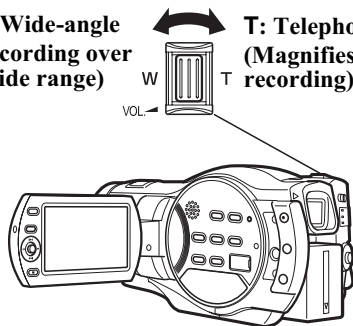
The zoom lever allows you to choose a range of magnifications from wide-angle to telephoto zooming.

Optical zooming up to ten times is the maximum telephoto magnification.

When using a card (recording stills), only optical zoom works.

W: Wide-angle
(Recording over a wide range)

T: Telephoto
(Magnifies recording)

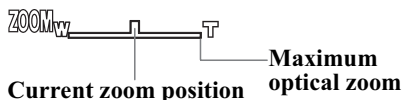


Maximum zoom values will depend on the “Digital Zoom” settings in the Menu as follows.

Digital zoom options

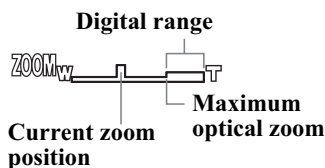
Off

When the zoom is used, the following optical zoom bar appears in the LCD monitor.



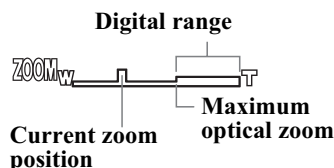
40x

When the optical zoom exceeds ten magnifications, the digital zoom starts working automatically. The maximum telephoto zoom value is 40x magnification. The zoom bar appears as follows.



500x

The maximum telephoto zoom is 500x magnification. The zoom bar appears as follows.

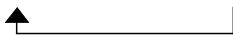


Setting the digital zoom

- 1 During recording pause, press **MENU**.
- 2 Select “Camera Functions Setup” ► “Digital Zoom” ► a digital zoom option
- 3 Press the confirmation button to confirm, then press **MENU** to end the menu.
 - The “Digital Zoom” setting is retained in memory even when the power is turned off.

Hint

You can also use the remote control for changing the maximum digital value. Each press of DIGITAL ZOOM switches the “Digital Zoom” setting as follows; “Off” → “40x” → “500x”

**Notes**

- When operating the zoom lever, the focus may blur for a moment.
- When digital zoom is added, the image quality will become coarser.
- When using a card (recording stills), the digital zoom cannot be set.

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Recording at Close Range (Macro Recording)

When you record a small subject at close range, you can bring the lens surface as close as approx. 2 cm to the subject. This will allow you to enlarge the subject to cover the entire screen.

Recording at close range

1 During recording pause or recording, point the camcorder at the subject and push the zoom lever toward the W side until the wide-angle is maximized.

- Recording up close may require more lighting. If the screen is dark, direct a light source at the subject.

Note

Although the zoom can be used, the focus may become blurred depending on the distance to the subject.

Using the Separately-Sold Lenses to Increase the Wide-Angle or Telephoto Effect

Use the tele-conversion lens (DZ-TL43 (separately-sold) to increase the telephoto effect, and the wide-conversion lens DZ-WL43 (separately-sold) to increase the wide-angle effect.

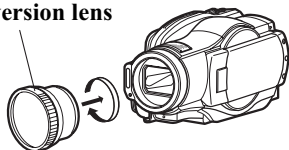
If you choose another model, make sure the filter diameter is 43mm and the screw pitch 0.75mm.

Attaching the separately sold lenses

Remove the lens cap from the conversion lens and attach the conversion lens to the camcorder

1

Conversion lens



Notes

- If you attach the DZ-TL43 conversion lens, the focusing range at the T (telephoto) side will be from approx. 3 m to infinity.
- When the tele-conversion lens or wide-conversion lens is used, the white balance may not function depending on recording conditions. (Normally, the white balance will be automatically adjusted.) In this event, adjust the white balance manually (p.79).
- When you zoom while the conversion lens is attached, the four corners of the screen may become a little dark or scratchy at the W (Wide) side. (The four corners may not be evenly dark.)
- When you are recording still pictures with the wide-conversion lens attached, the four corners of the screen will become dark at the W (Wide) side. If this happens, make it less wide.
- When changing lenses, be careful not to drop the camcorder.
- Attaching a conversion lens will prevent you from using the flash. Turn the "Flash" setting to "Off" (p.82).
- Some commercially sold conversion lens may not be compatible with this camcorder.

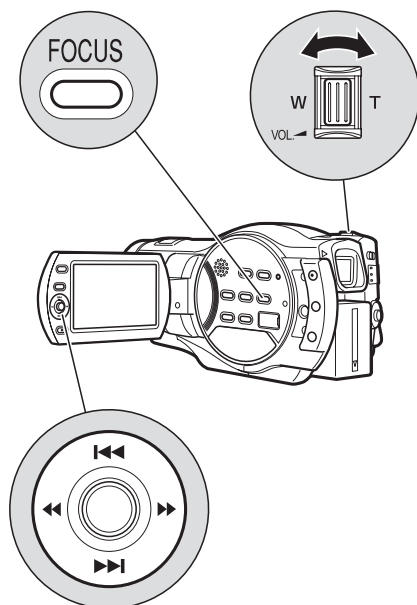
Adjusting the Focus Manually (Manual Focus)

If it is difficult to adjust the focus automatically, you can adjust it manually (Manual Focus). (See also "Difficult auto focus conditions" (p.74).)

Focusing range

- T (tele-photo) side:
Approx. 1 m from the lens surface to infinity.
- W (wide-angle) side:
Approx. 2 cm from the lens surface to infinity.

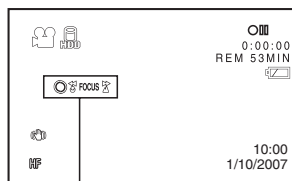
How to focus manually



During recording pause or recording, press **FOCUS**.

The Focus icon appears in the LCD monitor.

1



Manual focus icon

- Focusing switches between Manual Focus and Auto Focus each time **FOCUS** is pressed. The icon is displayed only during manual focusing.

2

Push the zoom lever toward the T (telephoto) side to magnify the subject.

3

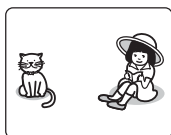
Adjust the focus by pressing ◀◀/▶▶.

- When the power is turned off, the camcorder returns to auto focus.
- To manually adjust the focus, always magnify the subject as in step 2. When the focus is adjusted for wide-angle zooming, the focus may become blurred if you switch to telephoto zooming.

Hint

If you wish to adjust exposure while focusing manually, press **EXPOSURE**. The exposure bar lights in orange. To return to manual focusing, press **FOCUS**.

Difficult auto focus conditions



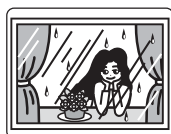
Subjects are not in the centre of the frame



Subjects that are both near and far



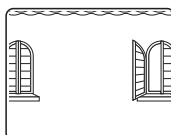
Subjects lit by a neon sign or spot light which glares or emits strong light



Subjects behind glass covered with water droplets or dirt



Subjects moving rapidly



Subjects with minimal variation in brightness such as a white wall



Dark subjects



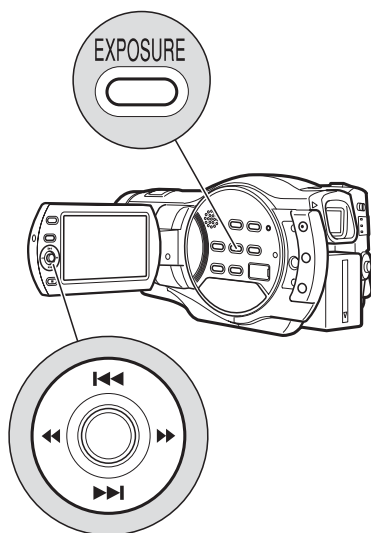
Night views

HDD BD-RE BD-R RAM RW (VR) RW (VF) R RW CARD

Adjusting the Brightness of the Image (Exposure)

Normally, the exposure is automatically adjusted. However, depending on the recording conditions, the exposure can be adjusted manually.

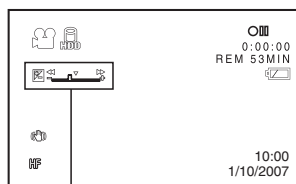
Adjusting the exposure manually



During recording pause or recording, press **EXPOSURE**.

The exposure bar appears in the LCD monitor.

1



Exposure Bar

- Each time you press **EXPOSURE**, exposure adjustment switches between manual adjustment and automatic adjustment. The exposure bar appears only during manual adjustment.

Adjust the exposure by pressing ◀▶.

2

- When the power is turned off, exposure adjustment returns to automatic adjustment.

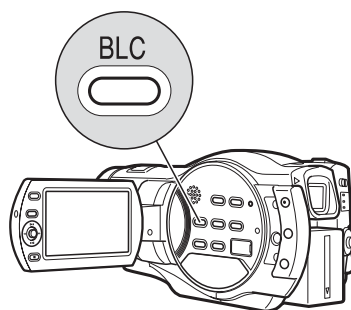
Hint

If you wish to adjust focus manually while adjusting exposure, press **FOCUS**. The manual focus icon lights in orange. To return to exposure adjustment, press **EXPOSURE**.

Compensating for Backlight (Backlight Compensation)

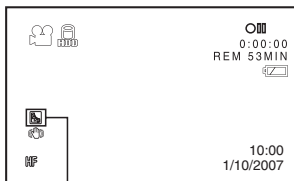
When the subject is lit from the rear, this function will compensate for lighting so that the subject is not too dark.

Compensating for backlight



During recording pause or recording, press **BLC**.

The backlight compensation icon appears in the LCD monitor.



Backlight compensation icon

- Each time you press **BLC**, the backlight setting turns On or Off. The backlight compensation icon appears only when this function is On.
- When the power is turned off, the backlight compensation setting returns to Off.

HDD BD-RE BD-R RAM RW(VR) RW(VF) R RW CARD

Selecting a Recording Mode to Match the Conditions (Program AE)

The camcorder automatically gauges the subject and surrounding conditions and determines the optimal settings for recording (during Auto). However, you can also select a recording mode that better suits the situation for even clearer images.

Recording mode

Auto (No icon appears.)



Portrait

Makes the subject, such as a person or pet, stand out from a blurred background.



Spotlight

Prevents overexposure of the subject in strong light, such as at a wedding or on stage.



Sand&Snow

Prevents underexposure of the subject in very bright conditions, such as at the beach or on a ski slope.



Low Light

Allows you to record in dark places with limited light.

You can use the LCD monitor as a light source to record the scene by turning the LCD monitor 180° (Assist Light).

Selecting a recording mode

1

During recording pause, press **MENU**.

2

Select "Camera Functions Setup" ►
"Program AE" ► a recording mode

3

Press the confirmation button to confirm, then **MENU** to end.
The selected recording mode (other than Auto) appears in the LCD monitor (p.50).

- The recording mode is retained in memory even when the power is turned off.

Note

When recording in dark places, after-images may appear if the subject is moving or if camera shake occurs. Use a tripod for best results.

HDD BD-RE BD-R RAM RW (VR) RW (VF) R RW CARD

Recording Dark Subjects Using the LCD Monitor Light (Assist Light)

You can use the LCD monitor as a light source which allows you to record a subject up to 1 m away even in a dark place.

To check images, use the viewfinder (p.21).

1

Repeat steps 1 to 3 on the left column to select "Low Light" for recording mode in step 2.

2

Rotate the LCD monitor 180° so that it faces the same direction as the lens.
The LCD monitor will light white.

Note

Moving subjects or camera shake may cause after-images to appear. Use a tripod for best results.

HDD BD-RE BD-R RAM RW (VR) RW (VF) R +RW CARD

Adjusting the Colour (White Balance)

Light is required when recording subjects. While the naked eye perceives colours as they are, images recorded by a camera may appear redder or bluer than they actually are. To record white coloured subjects as white images, adjust the white balance.

The camcorder normally adjusts the colour automatically (during Auto). Change the white balance setting according to the recording conditions.

White balance mode

Auto (No icon appears.)



Set

When recording sunsets and sunrises, recording in shade, and recording a stage lit with a spot light, you can manually adjust white balance to match the light source or situation.



Outdoors

To record in fine weather.



Indoor

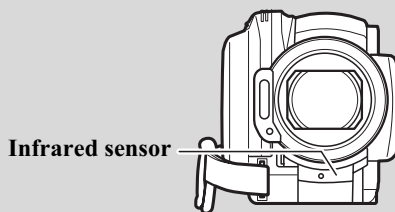
To record under incandescent light, halogen light or soft fluorescent light.

Selecting a white balance mode

- 1 During recording pause, press **MENU**.
- 2 Select "Camera Functions Setup" ► "White Balance" ► a white balance mode
- 3 Press the confirmation button to confirm, then **MENU** to end.
The selected white balance mode (other than Auto) will appear on the screen (p.50).
 - The white balance mode is retained in memory even when the power is turned off.

Note

Do not block the infrared sensor with your hand or other things to obtain a good cast for your recording.

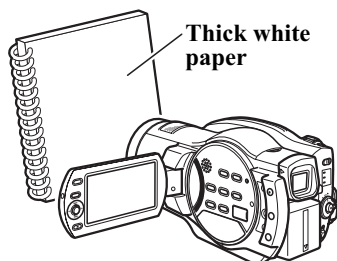


Infrared sensor

■ Setting the white balance manually (Set)

Prepare a white object such a thick sheet of white paper that is not translucent.

- 1 Point the camcorder at the white object so that it fills the screen.



- 2 During recording pause, press **MENU**.

- 3 Select "Camera Functions Setup" ► "White Balance" ► "Set"

- 4 Press the confirmation button. "☑" flashes in the LCD monitor.

- 5 Press the confirmation button again, and continue holding the button down until "☑" stops flashing and lights steadily.
The white balance setting is complete.

6

Press ■ to end, or to redo, repeat step 5.

- The white balance setting selected in "Set" is retained in memory until the setting is changed again.
- In order to accurately adjust the colour, readjust the settings in "Set" each time the recording conditions change. If the power is turned off while white balance is in "Set" mode, "☑" flashes in the LCD monitor the next time the power is turned on to remind you. As the previous setting is retained in memory, redo the settings if needed.

Notes

- It may be difficult to perform this setting in dark places. Also if the zoom bar is positioned in the digital range (p.70), you may not be able to set the white balance. If white balance settings cannot be accomplished, "☑" will continue to flash. Return the zoom to the optical range and redo the settings in a bright environment.
- If the "Set" settings are not completed within a few moments, the camcorder returns to recording pause mode and "☑" flashes in the LCD monitor. Redo the settings from step 1.

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW

Using the Electronic Image Stabiliser (EIS)

EIS corrects for fuzziness in an image when you zoom in on a subject.

We recommend turning EIS Off when you position the camcorder on a table or use a tripod when recording.

Turning EIS Off/On

- 1 During recording pause, press **MENU**.
- 2 Select "Camera Functions Setup" ► "EIS" ► "On"/"Off"
- 3 Press the confirmation button to confirm, then **MENU** to end.
When the function is turned On, "Ⓜ" appears in the LCD monitor (p.50).
 - EIS is retained in memory even when the power is turned off.
 - If "Off" is selected, be sure to return the setting to "On" afterwards, if you do not normally use a tripod, etc.

Notes

- When EIS is active, there will be a slight divergence between the actual camera movement and the on-screen movement.
- Even if EIS is turned On, the camera movement may not be corrected if the movement is too excessive.

We recommend you stabilise the camcorder using both hands and support your arms against your body when recording.

- EIS may not function correctly when a tele-conversion lens or wide-conversion lens is used.
- When using a card (recording stills), EIS cannot be set.
- Subjects may be distorted or blur while EIS is On due to the nature of the image sensor (CMOS sensor), which is not a malfunction. Also refer to "Troubleshooting" (p.148).

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW CARD

Displaying Recording Guidelines (Auxiliary Line)

You can display recording guidelines to help compose your shots.

Turning recording guidelines On/Off

- 1 During recording pause, press **MENU**.
- 2 Select "Camera Functions Setup" ► "Auxiliary Line" ► "On"/"Off"
- 3 Press the confirmation button to confirm, then **MENU** to end.
When "On" is selected, vertical and horizontal guidelines appear in the LCD monitor.

HDD BD-RE BD-R RAM RW (VR) RW (VF) R RW

Reducing Wind Noise During Recording

When recording sound from the built-in microphone, you can reduce wind noise in the recording when the MIC. filter is On. Lower frequencies noise is eliminated and the target sound becomes clearer.

Turning the MIC. filter On/Off

- 1 During recording pause, press **MENU**.
- 2 Select "Camera Functions Setup" ► "MIC. Filter" ► "On"/"Off" ►
- 3 Press the confirmation button to confirm, then **MENU** to end. When the function is turned On, "MIC" appears in the LCD monitor (p.50).
 - The MIC. filter setting is retained in memory even when the power is turned off.
 - If you set this function to "On", it is recommended to set the function to "Off" after recording before turning off the power unless you always intend to use this function.

Note

The MIC. filter does not work if you are using an external microphone (p.86).

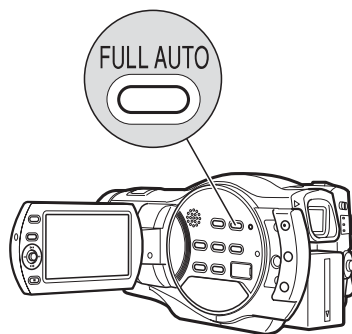
HDD BD-RE BD-R RAM RW (VR) RW (VF) R RW CARD

Restoring all the Recording Settings to Default (Full Auto)

You can reset the following manually adjusted recording settings to their defaults with the press of a single button.

Function	Default	See
Focus	Auto	p.73
Exposure	Auto	p.74
BLC (Backlight)	Off	p.75
Program AE (recording mode)	Auto	p.76
White Balance	Auto	p.78
EIS (Electronic Image Stabiliser)	On	p.80
MIC. Filter	Off	p.81

Setting the recording settings to full auto



- 1 During recording pause or recording, press **FULL AUTO**. "FULL AUTO" appears in the LCD monitor for a while and the settings are reset to their default settings.

CARD


Using the Flash

As shutter speed will slow down when still photos are recorded in dim lighting, camera shake may easily occur. We recommend you use a flash in this case.


Normally, the flash fires automatically depending on the recording conditions (during Auto). You can also set the flash to On (always fires) or Off (does not fire).

Flash mode


Auto

The flash fires only when necessary. When the flash is needed, “” appears in the LCD monitor when you press **PHOTO** halfway, and then the flash fires when you press **PHOTO** all the way.

On

“” is displayed in the LCD monitor all the time. The flash always fires when you fully press **PHOTO**.

Off

“” is always displayed in the LCD monitor and the flash will not fire.

Selecting a flash mode

1

During recording pause, press **MENU**.

2


Select “Camera Functions Setup” ►
“Flash” ► a flash mode

Press the confirmation button to confirm, then **MENU** to end.

- To check where the flash icon appears in the LCD monitor, see p.50.
- The flash setting is retained in memory even when the power is turned off.
- If “Off” or “On” is selected, and you do not plan to record with that flash mode all the time, we recommend you return the setting to “Auto” after recording and before turning off the power.

3

Hints

- There may be cases when the recorded pictures are out-of-focus in dark places even if the flash is used. We recommend you shine a light on the subject for recording in dark places.
- “” flashes in the LCD monitor while the flash is recharging and the flash will not fire.
- When recording stills up close, set “Flash” setting to “Off”. If the subject is too close, image smearing may occur.

Notes

- When a conversion lens is attached, the flash cannot be used. Adjust the “Flash” setting to “Off”.

- Although the flash range differs according to the subject, as a reference, its range is about 1–2.5 m in dark places.
- Although the amount of light emitted will automatically be adjusted at time of emission, the flash may not be sufficiently adjusted if the distance to the subject is too distant or too near.
- In bright or backlit conditions, it may be difficult to derive the full effect of the flash.
- When recording consecutive shots using the flash, the flash may not fire or the amount of light emitted may not be sufficiently adjusted. After using the flash to record, it is recommended that you wait for a while and then press **PHOTO** to record again.
- Do not emit the flash close up in front of a person's eyes. Doing so may cause eyesight damage. Particularly when recording infants using the flash, record at a distance greater than 1 m away.
- Do not fire the flash at the driver/rider of a moving vehicle or bicycle, etc. Doing so will temporarily blind the driver and may result in accident.
- Do not use the flash in locations where flammable or combustible gas is present. Doing so may cause the gas to ignite or explode.

HDD BD-RE BD-R RAM RW (VR) RW (VF) R RW CARD

Turning Off the Recording Indicator Beneath the Lens

The recording indicator beneath the lens lights red while recording to indicate that you are recording.

You can turn the indicator off when recording through reflective objects such as glass or a fish tank, etc., so its reflection is not recorded.

Turning Off/On the recording indicator

1 During recording pause, press **MENU**.

2 Select "Initial Setup" ► "Record LED" ► "Off"/"On"

3 Press the confirmation button to confirm, then **MENU** to end.

- The recording indicator setting is not displayed in the on-screen information.
- Even if the recording indicator is set to "Off", it will still light while the self-timer is counting down (p.85).

HDD BD-RE BD-R RAM RW (VR) RW (VF) R +RW

Changing the Movie Quality

You can change the movie recording quality to make high quality recordings or lower the quality to record over longer periods of time.

HD: High Definition

SD: Standard Definition

HDD Movie Quality (HD Video Mode) and Recording Time (DZ-BD7HE)

HD Video Mode	Explanation	Recording time
HX*	High	Approx. 4 hrs.
HF	STD	Approx. 5 hrs.
HS	Extended recording	Approx. 8 hrs.

* In high temperature environments, the image quality may be degraded to an HF equivalent.

BD Movie Quality (HD Video Mode) and Recording Time

HD Video Mode	Explanation	Recording time* ¹
HX* ²	High	Approx. 60 mins.
HF	STD	Approx. 80 mins.
HS	Extended recording	Approx. 120 mins.

*¹ Of one side of a disc if a double-sided disc is used.

*² In high temperature environments, the image quality may be degraded to an HF equivalent.

DVD Movie Quality (SD Video Mode) and Recording Time

SD Video Mode	Explanation	Recording time* ¹
SX* ²	XTRA	Approx. 20 mins.
SF	FINE	Approx. 30 mins.

*¹ Of one side of a disc if a double-sided disc is used.

*² In high temperature environments, the image quality may be degraded to an SF equivalent.

Switching Movie Quality

1 During recording pause, press **MENU**.

DZ-BD7HE

Select "Record Functions Setup" ►
"HD Video Mode" (When HDD or BD)/"SD Video Mode" (When DVD)
► a movie quality option

2

DZ-BD70E

Select "Record Functions Setup" ►
"HD Video Mode" (When BD)/"SD Video Mode" (When DVD)
► a movie quality option

3

Press the confirmation button to confirm, then **MENU** to end.

The selected movie quality will be displayed in the LCD monitor (p.50).

- The movie quality setting is retained in memory even if the power is turned off.
- When a BD is loaded in the camcorder, and the BD is replaced with another BD, the movie quality setting will not change.
- When a DVD is loaded in the camcorder, and the DVD is replaced with another DVD or a double-sided DVD is reversed, the movie quality setting will not change.
- When a DVD is replaced with a BD, the movie quality will be changed to the most recent BD setting (and vice versa).

CARD

Using the Self-Timer

You can use the self-timer to record still photos.

1

During still picture recording pause, press **MENU**.

2

Select "Record Functions Setup" ► "Self Timer" ► "On"

3

Press the confirmation button to confirm, then **MENU** to exit the menu.

The self-timer is set and "⌚10" appears in the LCD monitor (p.50).

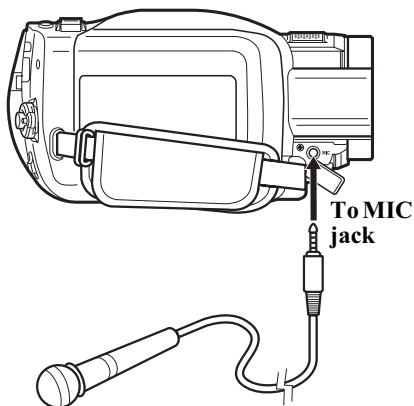
4

Press **PHOTO** halfway to adjust the focus, then press it all the way down. A countdown starts. In the LCD monitor, the countdown is shown as follows: "⌚10", "⌚9", The photo will be recorded about 10 seconds later. During countdown, the recording indicator on the lens side also flashes.

- To cancel the countdown and return to "⌚10", press **PHOTO** or **■**.
- The self-timer operates every time **PHOTO** is fully pressed and will not be set to "Off" until the following is conducted:
 - Set the self-timer to "Off" in the menu.
 - Turn off the power.
 - Switch to movie recording.

Using an External Microphone

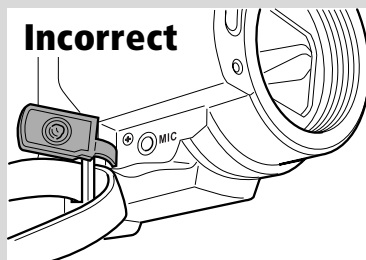
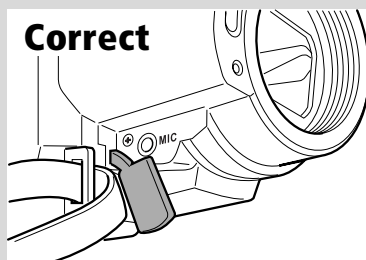
You can obtain clearer recording sounds by connecting a commercially sold external microphone to the camcorder's MIC connector.



- Only microphones with plug-in power can be used.
- Non plug-in power microphones are unusable.
- Before recording, be sure to switch on the external microphone.
- When the external microphone is connected, the internal microphone does not operate.

Note

When connecting a microphone, open the cover as in the "Correct" example.



HDD

This camcorder allows you to choose from four options when dubbing images recorded on HDD to a BD/DVD.

Dubbing options

• "New"

Among the scenes recorded to the HDD, scenes which have not yet been dubbed to BD/DVD are dubbed in order from the first scene.

• "Date"

Dubs all scenes recorded on the HDD on the same date to a BD/DVD, beginning with the first scene.

• "All"

Dubs all scenes recorded on the HDD to a BD/DVD, beginning with the first scene.

• "Select"

You can select your favourite scenes from all those recorded on the HDD, for dubbing.

Discs and picture quality for dubbing

• Dubbing to a BD disc

You can dub scenes in the original recorded quality.

• Dubbing to a DVD disc

- HD quality is converted to SD quality before dubbing of scenes.
- The quality mode can be selected when dubbing.

Time required for dubbing

Required time estimates for dubbing scenes approx. 60 minutes long are as follows:

Disc type	BD	DVD
HD/SD Video Mode		
HX	Approx. 30 mins.	—
HF	Approx. 22 mins.	—
HS	Approx. 15 mins.	—
SX/SF	—	Approx. 120 mins.

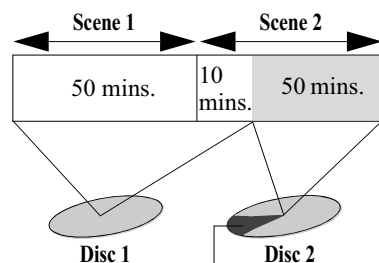
When the dubbing is not completed on one disc

If the data cannot be stored into a single BD/DVD, dubbing can be conducted in one of the two following ways.

• With auto divide

The scene capacity is automatically calculated and dubbed as much as possible into a single disc. This means that the disc may end with only part of the scene dubbed.

When dubbing to BD with HX Video Mode

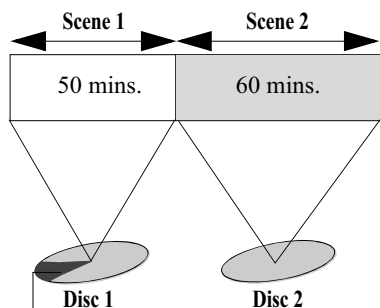


After dubbing to one disc, follow the screen message to continue dubbing the remaining scenes or time on the next disc. The screen message to continue dubbing on the next disc will reappear, until dubbing is complete.

• No auto divide

The maximum number of scenes for one disc will be dubbed.

When dubbing to a BD with HX Video Mode



10 minutes will remain.

Before you begin

- Prepare a recordable disc (p.38).
- Be sure to use the AC adapter/charger to power the camcorder during dubbing. Dubbing is not possible with a battery connected.
- If power is turned off and dubbing is interrupted midway, proper dubbing will not be possible.
- During a single dubbing, dubbing to both BD and DVD discs is not possible. To dub to multiple discs, prepare either multiple BD or multiple DVD discs.
- For details on the recording time for a scene that can be dubbed on one disc, see "Storage capacity of

HDD/BD/DVD/Card" (p.177).

- In "No auto divide" mode, dubbing will not be possible if the length of a scene or scenes to be dubbed exceeds the storage capacity for a single BD/DVD. Switch the mode to "With auto divide", or divide the scene (p.107) before dubbing.

Hints for dubbing

- The maximum number of scenes that can be dubbed will vary depending on the BD/DVD used (p.178).
- Dub marks "☑" appear for the thumbnails of the scenes which have already been dubbed.

About the playlist (p.102) for dubbing

- With this camcorder, the scenes on the HDD will be dubbed to a BD/DVD in the order they are displayed on HDD Disc Navigation screen. To dub the scenes in a different order, create a playlist in which the scenes are registered in the desired order of dubbing (p.103), and then execute dubbing.
- If you combine scenes with different recording dates on a playlist, and dub the combined scene to a BD-R/DVD-RW (VF mode)/DVD-R/+RW, the scenes will be dubbed separately for each date. However, if a combined scene is subsequently divided, the scenes may not be dubbed separately for each date.

About edited scenes such as divided (p.107), combined (p.108), and faded (p.109)

- If you divide a scene using the “Edit” function, and then dub both the divided scenes to a DVD, the scene will be dubbed as one scene, without the division.
- If you dub scenes combined using the “Edit” function to a DVD-RW (VF mode)/DVD-R/+RW, the two scenes immediately before the combination (sometimes more than two scenes) will be dubbed.

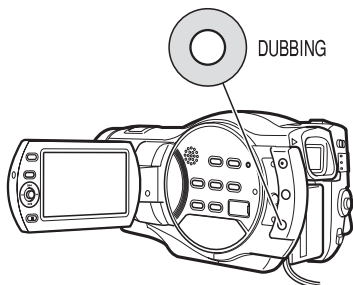
- The fade effect on edited scenes on the HDD will not be reflected in the scenes if they are dubbed on a BD-R/DVD-RW (VF mode)/DVD-R/+RW.

Notes on dubbing

- A BD-R/DVD-RW/DVD-R dubbed on this camcorder will not be automatically finalised. To play it back on a BD/DVD player/recorder, be sure to finalise it on this camcorder first.
- The time shown during dubbing is approximate. If the number of scenes on the HDD is too large, or the temperature of the camcorder becomes too high, the required recording time may be longer than the time indicated on the screen.
- Please note that Hitachi will not accept any responsibility for compensation for loss of data, or direct or indirect damage if dubbing is not performed normally due to a fault in this camcorder.
- We recommend first confirming that the dubbed disc can be played back normally before deleting scenes on the HDD dubbed.

First Dubbing (“New”)

This option allows you to dub scenes which were recorded to the HDD and have not yet been dubbed to BD/DVD.



1

Connect the AC adapter/charger to the camcorder (p.45).

- Dubbing is not possible if a battery pack is used as a power source.

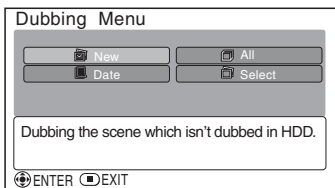
2

Turn the power switch to “MODE” until the HDD indicator lights (p.27).

3

Press **DUBBING**.

The dubbing menu appears.



4

Select “New”, then press the confirmation button.

5

Select “BD” or “DVD”, then press the confirmation button.

6

Choose a disc for dubbing and insert it into the camcorder (p.41).

- If a DVD is loaded, specify the Video Mode (“SX” or “SF”).
- If more than one disc is needed, go to step 7.
- If one disc is sufficient, then go to step 8.

7

Select “With auto divide” or “No auto divide”, then press the confirmation button.

The confirmation screen appears.

8

Select “Execute”, then press the confirmation button.

Dubbing starts.

9

When another disc is needed to continue dubbing, a message screen requesting another blank disc appears. Replace a disc with a new one.

10

After the dubbing is complete, the confirmation screen whether or not you delete the dubbed scenes appears.

- If you wish to erase the dubbed scenes, select “Yes”.
- If you wish to leave them on the HDD, select “No”.

11

Remove the disc.

- Or press **■** to end.

Hints

- You can also display the Dubbing Menu from the Disc Navigation screen. Press **DISC NAVIGATION**, press **MENU**, select “Scene” ▶ “Dubbing” ▶ “Dubbing Menu”, and then press the confirmation button.
- If you want to use “New” dubbing for a dubbed scene, clear the dub marks (p.95).
- If you wish to quit dubbing while dubbing, press ■. The confirmation message appears. Select “Yes” and press the confirmation button to quit dubbing.

Dubbing All Scenes Recorded on the Same Day (“Date”)

This option allows you to collectively dub all scenes recorded on the HDD on the same day.

1

Connect the AC adapter/charger to the camcorder (p.45).

- Dubbing is not possible if a battery pack is used as a power source.

2

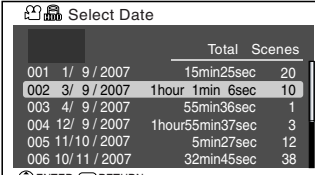
Turn the power switch to “MODE” until the HDD indicator lights (p.27).

3

Press **DUBBING**.
The Dubbing Menu appears.

4

Select “Date”, then press the confirmation button.
The “Select Date” screen appears.



			Total	Scenes
001	1/ 9 / 2007	15min25sec	20	
002	3/ 9 / 2007	1hour 1min 6sec	10	
003	4/ 9 / 2007	55min36sec	1	
004	12/ 9 / 2007	1hour55min37sec	3	
005	11/10 / 2007	5min27sec	12	
006	10/11 / 2007	32min45sec	38	

ENTER RETURN

5

Select a date for dubbing, then press the confirmation button.

6

Select “BD” or “DVD”, then press the confirmation button.

7

Choose a disc for dubbing and insert it into the camcorder (p.41).

- If a DVD is loaded, specify the Video Mode (“SX” or “SF”).
- If more than one disc is needed, go to step 8.
- If one disc is sufficient, then go to step 9.

8

Select “With auto divide” or “No auto divide”, then press the confirmation button.

The confirmation screen appears.

9

Select “Execute”, then press the confirmation button.
Dubbing starts.

10

When another disc is needed to continue dubbing, a message screen requesting another blank disc appears. Replace a disc with a new one.

11

After the dubbing is complete, the confirmation screen whether or not you delete the dubbed scenes appears.

- If you wish to erase the dubbed scenes, select “Yes”.
- If you wish to leave them on the HDD, select “No”.

12

Remove the disc.

- Or press **■** to end.

Hints

- You can also display the Dubbing Menu from the Disc Navigation screen. Press **DISC NAVIGATION**, press **MENU**, select “Scene” **▶** “Dubbing” **▶** “Dubbing Menu”, and then press the confirmation button.
- If you wish to quit dubbing while dubbing, press **■**. The confirmation message appears. Select “Yes” and press the confirmation button to quit dubbing.

Dubbing All Scenes Recorded on the HDD (“All”)

You can dub all scenes recorded on the HDD from the beginning in sequence.

1

Connect the AC adapter/charger to the camcorder (p.45).

- Dubbing is not possible if a battery pack is used as a power source.

2

Turn the power switch to “MODE” until the HDD indicator lights (p.27).

3

Press **DUBBING**.

The Dubbing Menu appears.

4

Select “All”, then press the confirmation button.

The “Dubbing(All)” screen appears.

5

Select “BD” or “DVD”, then press the confirmation button.

6

Choose a disc for dubbing and insert it into the camcorder (p.41).

- If a DVD is loaded, specify the Video Mode (“SX” or “SF”).
- If more than one disc is needed, go to step 7.
- If one disc is sufficient, then go to step 8.

7

Select “With auto divide” or “No auto divide”, then press the confirmation button.

The confirmation screen appears.

- 8 Select "Execute", then press the confirmation button.
Dubbing starts.
- 9 When another disc is needed to continue dubbing, a message screen requesting another blank disc appears. Replace a disc with a new one.
- 10 After the dubbing is complete, the confirmation screen whether or not you delete the dubbed scenes appears.
 - If you wish to erase the dubbed scenes, select "Yes".
 - If you wish to leave them on the HDD, select "No".
- 11 Remove the disc.
• Or press ■ to end.

Hints

- You can also display the Dubbing Menu from the Disc Navigation screen. Press **DISC NAVIGATION**, press **MENU**, select "Scene" ► "Dubbing" ► "Dubbing Menu", and then press the confirmation button.
- If you wish to quit dubbing while dubbing, press ■. The confirmation message appears. Select "Yes" and press the confirmation button to quit dubbing.

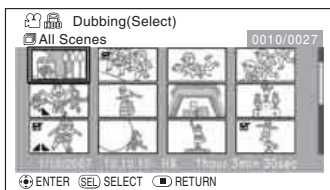
Dubbing Scenes Selected ("Select")

You can select your favourite scenes from all those recorded on the HDD, for dubbing.

- 1 Connect the AC adapter/charger to the camcorder (p.45).
 - Dubbing is not possible if a battery pack is used as a power source.
- 2 Turn the power switch to "MODE" until the HDD indicator lights (p.27).
- 3 Press **DUBBING**.
The Dubbing Menu appears.
- 4 Select "Select", then press the confirmation button.
- 5 Select "BD" or "DVD", then press the confirmation button.
- 6 Choose a disc for dubbing and insert it into the camcorder (p.41).
 - If a DVD is loaded, specify the Video Mode ("SX" or "SF").
- 7 Select "With auto divide" or "No auto divide", then press the confirmation button.
The confirmation screen appears.

Select a scene for dubbing by pressing **SELECT**, then press the confirmation button
Repeat this step until you choose all the scenes to be dubbed.

8



Select “Execute ”, then press the confirmation button.
Dubbing starts.

9

When another disc is needed to continue dubbing, a message screen requesting another blank disc appears. Replace a disc with a new one.

10

After the dubbing is complete, the confirmation screen whether or not you delete the dubbed scenes appears.

11

- If you wish to erase the dubbed scenes, select “Yes”.
- If you wish to leave them on the HDD, select “No”.

12

Remove the disc.
• Or press ■ to end.

Hints

- You can also display the Dubbing Menu from the Disc Navigation screen. Press **DISC NAVIGATION**, press **MENU**, select “Scene” ► “Dubbing” ► “Dubbing Menu”, and then press the confirmation button.
- If you wish to quit dubbing while dubbing, press ■.
The confirmation message appears. Select “Yes” and press the confirmation button to quit dubbing.

Displaying only Dubbed or Not Dubbed Scenes (Category)


You can display all scenes recorded on the HDD according to their dubbed status.

Category Settings


“All”

All scenes will be displayed in chronological order of recording regardless of whether they have been dubbed or not.

“Dubbed”

Only scenes with the “” dub mark will be displayed in chronological order of recording.

“Un Dubbed”

Only scenes without the “” dub mark will be displayed in chronological order of recording.

To set “Category”


1 Press **DISC NAVIGATION**, then press **MENU**.

2 Select “Others” ▶ “Category” ▶ a Category option

3 Press the confirmation button, then press **MENU** to end.

- The Category setting will return to “All” if you exit the disc navigation screen.

Clearing the dub marks on Thumbnails (MARK OFF)

You can use “New” dubbing again by clearing the dub mark “”.

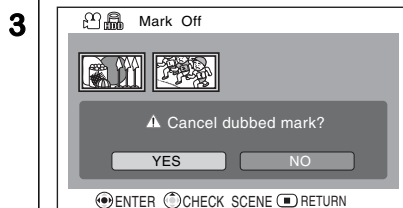
1 Press **DISC NAVIGATION**.

2 Choose a scene for which you want to clear the dub mark, then press **SELECT**, then press **MENU**.

- You can also choose multiple scenes (p.57).

Select “Scene” ▶ “Dubbing” ▶ “Mark Off”, then press the confirmation button.

- The confirmation screen appears.



4 Select “YES”, then press the confirmation button.

5 Press  to end.

By using the **DISC NAVIGATION** and **MENU** buttons, you can also edit recorded scenes. The following edit functions are available on the camcorder.

Convenient playback

The following are the functions that enable you to play back the scenes as if they were edited without changing the original data.

- **Date (p.101)**

You can play back scenes by specifying the desired recording date. The scenes are played sequentially from the earliest one of the date.

- **Playlist (p.102)**

You can create a playlist by gathering your favourite scenes to play back. You can also delete or add scenes on the created playlist.

- **Fade (p.109)**

You can add fading to the beginning or ending of a scene. You can select from three types of fading effects.

- **Information Display (p.111)**

You can choose a scene and check its recording date and time, image quality, length (for movie), and settings.

- **Lock (p.110)**

To avoid accidental deletion, you can choose stills and lock them. (You can also select all stills and lock them all.)

- **Format (p.112)**

You can erase all data from the selected medium.

Editing the original data

- **Deleting scenes (p.107)**

- **Dividing a movie (p.107)**

- **Combing multiple movies (p.108)**

Other editing

- **Go To (p.110)**

You can jump to the first or last scene among all scenes on the selected medium.

Menu Items for the Disc Navigation

After pressing **MENU** on the disc navigation screen, you can use following functions.

Function	HDD	BD		DVD					Card	Contents	Page
		-RE	-R	-RAM	-RW (VR mode)	-RW (VF mode)	-R	+RW			
Editing	●	●		●	●				▲*1	You can delete unnecessary scenes, combine scenes, or divide one scene.	p.107
Scene lock									●	You can lock any scene so that it will not be deleted by mistake.	p.110
Information display	●	●	●	●	●	●	●	●	●	You can display information on one scene or multiple scenes, such as image quality, recording time, etc.	p.111
Creating a playlist	●	●		●	●					You can create an original movie by changing the playback order of scenes.	p.103
Initialisation	●	●		●	●	●		●	●	You can delete all data recorded on the HDD/BD/DVD/Card.	p.112
Protection	●	●		●	●					You can protect the HDD or a disc to prevent deletion or editing by mistake.	p.113
Unprotection	●	●		●	●					You can cancel the protection.	p.113
Remaining display (Capacity)	●	●	●	●	●	●	●	●	●	The remaining recordable movie time or number of recordable stills is displayed.	p.114
Finalisation			●		●*2	●	●	●		You can use this camcorder to finalise any BD-R/DVD-RW/DVD-R/+RW disc recorded on it so that the disc can be viewed on another compatible BD/DVD player or device.	p.120

Function	HDD	BD		DVD					Card	Contents	Page
		-RE	-R	-RAM	-RW (VR mode)	-RW (VF mode)	-R	+RW			
Unfinalisation						●		●		You can unfinalise a DVD-RW (VF mode)/+RW that was finalised on this camcorder so that additional videos can be recorded on the disc.	p.122
Repeat play	●	●	●	●	●	●	●	●		You can play back scenes repeatedly.	p.64
Slide show									●	You can play back stills in succession.	p.63

*1 Only deletion is possible

*2 Additional recording can be made on a finalised DVD-RW (VR mode).

■ Menu flows for the disc navigation

After pressing **MENU** on the disc navigation screen, the menu screen appears. The menu varies depending on the medium as shown below.
Use ◀◀▶▶/◀◀▶▶ for operations. See "How to Operate the Menu" (p.65).

● When using HDD (DZ-BD7HE)/BD-RE/DVD-RAM/DVD-RW (VR mode)

Scene	Edit	Delete (p.107)	HDD Setting/ Disc Setting (BD/DVD)	Finalize Disc (p.118) (DVD-RW only)		
		Divide (p.107)		Format HDD/Disc (p.112)		
		Combine (p.108)		Protect HDD/Disc (p.113)		
		Fade (p.109)		Unprotect HDD/Disc (p.113)		
		Create Playlist* ¹ (p.103)		Capacity (p.114)		
		Move* ²		Update Control Info. (p.152)		
	Dubbing (p.87) (HDD only)	Dubbing Menu		Full Format (p.162) (HDD only)		
		Mark Off (p.95)	Others	Repeat Play (p.64)	On Off	
	Detail (p.111)			Category (p.95) (HDD only)	All Dubbed Un Dubbed	
	Go To (p.110)	Top End				
	Select (p.57)	Start → Current Current → end All				
		Date/Playlist Select		All Scenes		
		Date (p.101)				
Playlist (p.104)						

*1 This menu item does not appear while playlist is displayed.

*2 This menu item appears only while playlist is displayed.

*1 This menu item does not appear while playlist is displayed.
*2 This menu item appears only while playlist is displayed.

● When using BD-R/DVD-RW (VF (Video) mode)/DVD-R/+RW

Scene	Detail (p.111)	
	Go To (p.110)	Top
		End
	Select (p.57)	Start → Current
		Current → end
		All
Date Select	All Scenes	
	Date (p.101)	

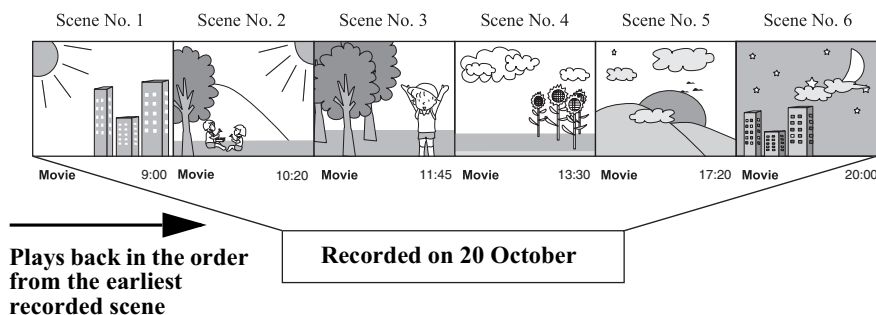
Disc Setting (BD/DVD)	Finalize Disc (p.118)	
	Unfinalize Disc (p.122) (DVD-RW/+RW only)	
	Format Disc (p.112) (DVD-RW/+RW only)	
	Capacity (p.114)	
Others	Repeat Play (p.64)	On
		Off

● When using a card

Scene	Delete (p.107)	
	Lock (p.110)	Set
		Cancel
	Detail (p.111)	
	Go To (p.110)	Top
		End
	Select (p.57)	Start → Current
		Current → End
		All

Date Select	All Scenes	
	Date (p.101)	
Card Setting	Format Card (p.112)	
	Capacity (p.114)	
Playback Setting	Slide Show (p.63)	On
		Off

Choosing Scenes by Date



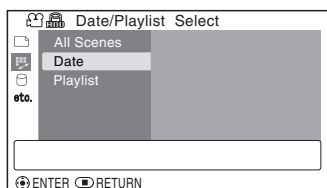
Switching to the display arranged by date (Date)

- 1 Press **DISC NAVIGATION**, then press **MENU**.

- 2 Select "Date/Playlist Select" (or "Date Select" in case of BD-R/DVD-RW (VF mode)/DVD-R/+RW/Card) ► "Date", then press the confirmation button. The "Date Select" screen appears.

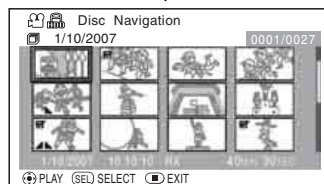
Select the date you want to watch, then press the confirmation button. The disc navigation screen of the selected date will appear.

- 3



Date Select		Total	Scenes
001	1/ 9 / 2007	15min25sec	20
002	3/ 9 / 2007	1hour 1min 6sec	10
003	4/ 9 / 2007	55min36sec	1
004	12/ 9 / 2007	1hour55min36sec	3
005	11/10 / 2007	1hour30min20sec	27
006	1/11 / 2007	1hour40min32sec	38

ENTER RETURN



Hints

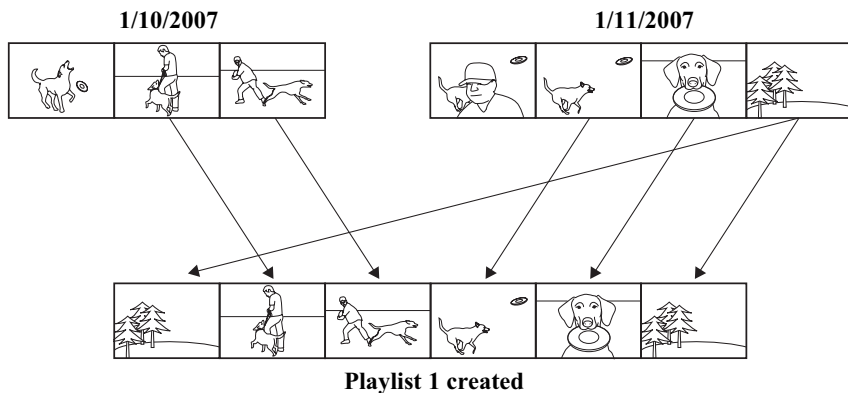
- Pressing ■ on the "Date Select" screen will restore the disc navigation screen.
- If you recorded movies in different Video Mode settings on the same day, or load a disc recorded on another device into the camcorder, the displayed scenes may not necessarily be a collection of recordings made on the same date.

Playlist

■ What is "Playlist"?

A Playlist is a compilation of scenes from various movies. You can create a Playlist on this camcorder by gathering your favourite scenes.

Since a Playlist is not created by copying data, very little HDD/disc space is required to make one. Note, likewise, that deleting scenes from a Playlist will not increase the remaining HDD/disc capacity for recording.



Up to 99 playlists can be created.

■ Creating a new Playlist (Create Playlist)

1 Press **DISC NAVIGATION**.

2 Select the scenes to be included in the playlist, then press **MENU**.

- You can also select multiple scenes at the same time (p.57).

3 Select "Scene" ► "Edit" ► "Create Playlist", then press the confirmation button.
The "Create Playlist" screen will appear.

4 To proceed, select "Yes", then press the confirmation button.
When creation is complete, the created playlist will appear on the Disc Navigation Playlist screen.

Hints

- The scenes that make up a playlist are not actually copied, but are linked from their original data. Deleting a scene from a playlist will not delete the original data (scenes) from the HDD or disc. Likewise, editing scenes on a playlist will not affect the original data (scenes).
- If a scene has the fade setting, or a dub mark "☑", that information will also be added to the playlist.
- You can add other scenes or remove unnecessary scenes to/from the created playlist (see p.104-105).
- A number will be included in the playlist title, as in "Playlist 1", "Playlist 2".

Notes

- If free space available on the HDD/disc is insufficient, creation of a new playlist may not be possible. Delete unnecessary scenes.
- Choose movies recorded in the same HD Video Mode setting (p.84) to include them in a playlist. Otherwise, a playlist cannot be created.

■ Displaying a desired Playlist (Playlist)

After selecting the desired playlist, the disc navigation screen will appear.

- 1 Press **DISC NAVIGATION**, then press **MENU**.
- 2 Select "Date/Playlist Select" ► "Playlist", then press the confirmation button.
The "Select Playlist" screen appears.
- 3 Select the playlist you want to display, then press the confirmation button.
The disc navigation screen of the selected playlist will be displayed.

Hint

To return the disc navigation screen to let it show all recorded scenes, select "Date/Playlist Select" ► "All Scenes".

● Editing a playlist

The procedures for editing playlists are the same as for scenes. Refer to the following pages for scene dubbing/editing to apply the same procedures to dub/edit a playlist.

- Dubbing.....p.87
- Dividing a scenep.107
- Deleting scenep.107
- Combining scenesp.108
- Arranging order of scenes p.106
(only on play list)
- Adding fadep.109

■ Adding scenes to a Playlist (Edit)

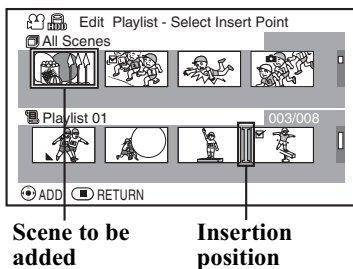
- 1 Press **DISC NAVIGATION**, then press **MENU**.
- 2 Select "Date/Playlist Select" ► "Playlist", then press the confirmation button.
The "Select Playlist" screen appears.
- 3 Select the playlist you want to edit, then press the confirmation button.
The targeted playlist screen appears.
- 4 Press **MENU**, then select "Playlist" ► "Edit", then press the confirmation button.
The scenes that can be added are displayed in the upper row, and the playlist to be edited appears in the lower row.
- 5 Choose a scene you wish to add by pressing ◀◀/▶▶, then press the confirmation button.



- You can also choose multiple scenes (p.57).

Choose the desired insertion position by pressing ◀◀/▶▶.

6



7

Press the confirmation button.

- Repeat steps 5 and 6 to add other scenes.

8

Press ■.

The confirmation screen whether to end appears.

Hint

Pressing ■ in the middle of adding scenes will display the exit confirmation screen. Select “Yes” to exit. Select “No” to restore the “Edit Playlist” screen.

Note

You cannot add movies recorded in different HD Video Mode settings (p.84).

■ Deleting scenes from Playlist (Edit)

1

Press **DISC NAVIGATION**, then press **MENU**.

2

Perform steps 2–4 in “Adding scenes to a Playlist (Edit)” (p.104).

3

Press ▶▶| to move the cursor to the lower row, then choose a scene you wish to delete by pressing ◀◀/▶▶.

- You can also choose multiple scenes (p.57).

4

Press the confirmation button.

- Repeat step 3 to delete other scenes.

5

Press ■.

The confirmation screen whether to end appears.

■ Arranging the order of scenes in the Playlist (Edit)

- 1** Press **DISC NAVIGATION**, then press **MENU**.

- 2** Select "Date/Playlist Select" ► "Playlist", then press the confirmation button.
The "Select Playlist" screen appears.

- 3** Select the playlist you want to edit, then press the confirmation button.
The targeted playlist screen appears.

- 4** Select the scene you want to move, then press **MENU**.
You can also select multiple scenes (p.57).

- 5** Select "Scene" ► "Edit" ► "Move", then press the confirmation button.
The "Move Scene" screen appears.

- 6** Select the position where you wish to move the scene, then press the confirmation button.
The confirmation screen appears.

- 7** Select "Yes", then press the confirmation button.
The scenes of the playlist are rearranged and the screen returns to the playlist screen.
• Select "No" to quit the move.

■ Deleting a Playlist (Delete)

Even if you delete a playlist, the original scenes stored on the HDD/disc will not be deleted.

- 1** Press **DISC NAVIGATION**, then press **MENU**.

- 2** Select "Date/Playlist Select" ► "Playlist", then press the confirmation button.
The "Select Playlist" screen appears.

- 3** Select the playlist you want to delete, then press the confirmation button.
The targeted playlist screen appears.

- 4** Press **MENU**, then select "Playlist" ► "Delete", then press the confirmation button.
After deletion, the disc navigation screen will be restored.
• To quit deletion, press ■ instead of the confirmation button.

Hint

If any playlist is deleted, the number of playlists will automatically be revised. (For example, if the No.2 playlist is deleted, the No.3 playlist will become the No.2 playlist, etc.)

Deleting Scenes (Edit - Delete)

You can delete unnecessary scenes.

1 Press **DISC NAVIGATION**.

2 Select the scene you want to delete, then press **MENU**.

- You can also choose multiple scenes (p.57).

3 For a card
Select "Scene" ► "Delete", then press the confirmation button.

- For others
Select "Scene" ► "Edit" ► "Delete", then press the confirmation button.

The confirmation screen appears.

4 Select "Yes", then press the confirmation button.

- The selected scene will be deleted, then the display returns to the disc navigation screen.

Hints

- You can also delete a scene by pressing **DELETE** on the remote control after placing the cursor on the scene you want to delete on the disc navigation screen.
- To delete an unwanted part of a scene on HDD/BD-RE/DVD-RAM/DVD-RW (VR mode) disc, divide the scene first, then delete the unnecessary part.

Notes

- If the time of the deleted scenes (stills) is quite short, the remaining free space of the HDD/BD/DVD/card may not show any increase in the HDD/disc or card remaining space indicator.
- The locked scenes on a card cannot be deleted (p.110).
- If you delete all data on the HDD/BD/DVD/card, formatting the HDD/BD/DVD/card is recommended (p.112).

Dividing a Movie (Edit - Divide)

You can divide a scene into two parts. To delete an unnecessary portion of a scene, first divide the scene at the point where you want to end or start saving, and then delete the unnecessary portion.

1 Press **DISC NAVIGATION**.

2 Select the scene you want to divide, then press **MENU**.

3 Select "Scene" ► "Edit" ► "Divide", then press the confirmation button.

The selected scene is played.


4 When you reach the desired point of division, press **SELECT**.

The confirmation screen appears.

5

Select "Yes", then press the confirmation button.


The selected scene will be divided, then the display will return to the disc navigation screen.

- Select "No" to quit division. The playback pause screen will appear. Press  to quit.

Hints

- Search and frame advance (p.62) are useful when designating division points.
- If a fade has been added to the original scene, the "IN" effect will be added to the first half of the scene, and the "OUT" effect, to the latter half (p.109).
- Combining scenes that were divided will restore the original scene.

Notes

- Frame by frame and slow forward/reverse playback while dividing scenes will forward or reverse a movie in increments of 0.5 seconds.
- If the division point is at the start or end of a scene, a message indicating this appears and division cannot be made.
- A movie scene of 0.5 seconds or less cannot be divided.
- If free space available on the HDD/BD/DVD is insufficient, division will not be possible. Delete unnecessary scenes.
- If you divide a scene with the dub mark , the dub marks will appear on both divided scenes.

HDD BD-RE RAM RW(VR)

Combining Multiple Scenes (Edit - Combine)

If you have recorded numerous short scenes, combining them can be convenient.

Be sure to select consecutive multiple scenes. When using the HDD, combining scenes is possible only if "Category: All" is specified (p.95). Stills cannot be combined.

1 Press **DISC NAVIGATION**.

Select the scenes you want to combine, then press **MENU**.

- 2
- Choose more than one scene (p.57).
 - You cannot proceed to next step if you have chosen only one scene.

3 Select "Scene" ► "Edit" ► "Combine", then press the confirmation button.


The confirmation screen appears.

4 Select "Yes", then press the confirmation button.
The scenes are combined.
The display returns to the disc navigation screen.

Hint

With fade effects, the "IN" effect of the first scene in the selected range and the "OUT" effect of the last scene will be attached to the combined scene.

Notes

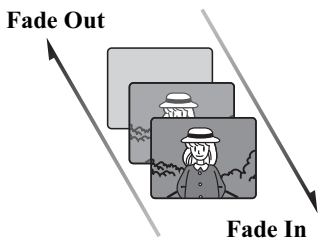
- Scenes in different recording dates cannot be combined. Create a Playlist first (p.103), then combine such scenes on the Playlist.
- You cannot add movies recorded in different HD Video Mode settings (p.84).
- If you combine scenes, both with dub marks "  ", the dub mark will appear on the combined scene.
- If you combine scenes, both with and without dub marks, the dub mark will not appear on the combined scene.

HDD BD-RE RAM RW(VR)

Adding Special Effects (Edit - Fade)

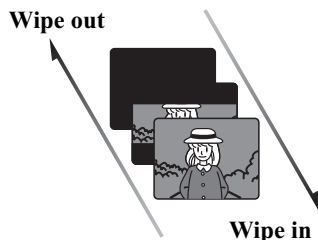
You can add fading to the beginning and/or end of a scene.
There are three types of special effects:

White



- Fades in from a white screen.
- Fades out to a white screen.

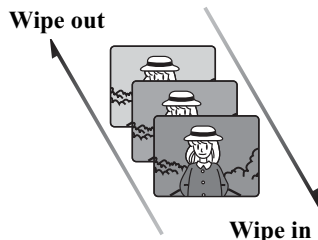
Wipe



In: From a black screen, the image opens from a horizontal split at the centre.

Out: The image closes with two black wipes meeting at the horizontal centre.

B/W



Fades in from a black and white screen to a full colour screen.

Fades out from a full colour screen to a black and white screen.

1 Press **DISC NAVIGATION**.

2 Select the scene you want to apply a special effect to, then press **MENU**.
• You can also choose multiple scenes (p.57).

3 Select "Scene" ► "Edit" ► "Fade", then press the confirmation button.
The "Fade" screen appears.

4

Select the special effects for "IN" or "OUT", ► "Enter", then press the confirmation button.

- Use ◀◀/▶▶ to move the cursor to "IN", "OUT", "Enter", or "Cancel".
- Use ◀◀/▶▶ to select the effect to be added, then press the confirmation button to set the effect.
- After the confirmation, a message appears and the disc navigation screen will be restored.
- To cancel setting, select "Cancel".
- Repeat steps 2–5 to add effects to other scenes.

5

Select "Yes", then press the confirmation button.

The "▲" or "▼" icon will appear in the scenes for which fade in or fade out has been set.



Notes

- If a BD/DVD disc with a special effect created on this camcorder is played on another BD/DVD reorder/player, or the scene is captured on a PC, the special effect will not be reflected.
- When dubbing on a BD-R/DVD-RW (VF mode)/DVD-R/+RW disc (p.87), the special effect will not be reflected.

HDD BD-RE BD-R RAM ◀RW (VF) ▶RW (VF) R ◀RW CARD

Go To

You can move the cursor to the scene recorded first or last using this function.

1

Press **DISC NAVIGATION**, then **MENU**.

2

Select "Scene" ► "Go To" ► "Top" or "End", then press the confirmation button.

The cursor jumps to the top or last scene in the disc navigation screen.

CARD

Locking Scenes on a Card (Lock)

You can lock selected stills recorded on a card so that they will not be deleted or edited by mistake.

1

Set the Movie/Stills switch to "📷" and turn on the camcorder power.

2

Press **DISC NAVIGATION**.

3

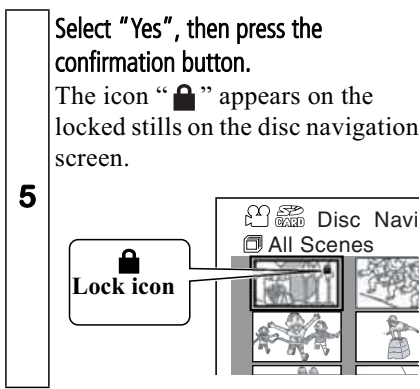
Select the still you want to lock, then press **MENU**.

- You can also choose multiple scenes (p.57).

4

Select "Scene" ► "Lock" ► "Set", then press the confirmation button.

The confirmation screen appears.



● To unlock the scene

Perform steps 1–3 in "Locking Scenes on a Card (Lock)", then select "Scene" ▶ "Lock" ▶ "Set", then press the confirmation button.

The lock icon "🔒" will disappear and locking will be released.

Note

If you format the card, the locked scenes will also be deleted.

HDD BD-RE BD-R RAM RW (VR) RW (VF) R +RW CARD

Displaying Information Using the Menu Screen (Detail)

You can display various information for a scene: the recording mode, recording date/time and length, special effects and movie quality mode.

1 Press **DISC NAVIGATION**.

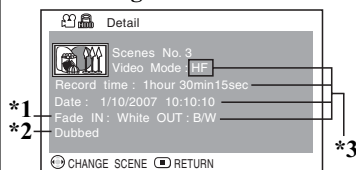
2 Select the scene you want to know about, then press **MENU**.

Select "Scene" ▶ "Detail", then press the confirmation button.

The detailed information of the scene appears.

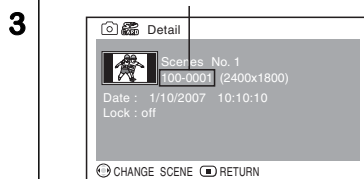
- Pressing ▶▶/◀◀ will display information of other scenes.

When using HDD/BD



- When using DVD, a screen with different information appears.

When using a card



- *1 Not displayed with DVD-RW (VF mode)/DVD-R/+RW discs.
- *2 "Dubbed" appears only when you selected a scene from the HDD, with a dub mark on its thumbnail.
- *3 Not displayed with DVD-RAM/ DVD-RW/DVD-R (finalised)/ +RW discs recorded on another device.
- *4 Will not appear if the loaded card does not comply with DCF (Design rule for Camera File system).

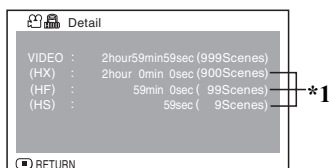
Press to quit.

4 The disc navigation screen will be restored.

Hints

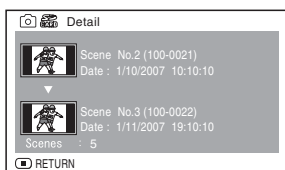
- DCF (Design rule for Camera File system) is a unified image file format for video cameras. Image files can be commonly used for all digital devices that conform to DCF. This camcorder complies with DCF.
- If multiple scenes have been selected, the total recording time of the selected scenes (total number in case of stills) will appear.

When using the HDD/BD



- When using DVD, a screen with different information appears.

When using a card



- *1 Not displayed with a DVD-RAM/ DVD-RW/DVD-R (finalised) / +RW disc that was recorded on another device.

HDD BD-RE RAM +RW(VR) +RW(VF) +RW CARD

Formatting the HDD/BD/DVD/CARD (Format HDD/Disc/Card)

Formatting the HDD, or a BD/DVD or card deletes all recorded contents.

If you wish to delete all recorded contents, it is recommended that you use format, which will delete all the scenes much quicker than using the scene delete function.

Note

Formatting will delete all the recorded contents on the HDD, disc, or card. Be careful not to delete data by mistake.

1 Insert the medium you want to format (except for the HDD).

2 Press **DISC NAVIGATION**, then press **MENU**.

Select "HDD Setting" or "Disc Setting" or "Card Setting" ► For "HDD Setting", select "Format HDD" then press the confirmation button.

3 Likewise, for "Disc Setting", select "Format Disc", or for "Card Setting" select "Format Card" then press the confirmation button.

The confirmation screen appears.

Select "Yes", then press the confirmation button.

- When using the HDD/BD-RE/DVD-RAM/+RW/Card, formatting will start.
- When using a DVD-RW disc, a screen for prompting you to select the VF mode or VR mode will appear. See p.43.

- 4** * If you choose "VR mode" when formatting a DVD-RW (VR mode), finalisation will not be cancelled. All contents on the disc will be erased after being formatted and the disc will be a finalised DVD-RW (VR mode) and recordable.

If you choose "VF mode" above, finalisation will be cancelled.

- Select "No" to quit formatting.

Notes

- It may not be possible to format a dirty or scratched disc. Such a disc cannot be used.
- This camcorder may not recognise some discs or cards that were formatted on a PC or another device.
- If the camcorder is turned off during formatting the inserted disc will become unusable.

HDD BD-RE RAM +RW(VR)

Protecting the HDD/ BD/DVD (Protect HDD/Disc)

Although previously recorded movies will not be erased by recording new movies, a protect setting will ensure against accidental erasure and formatting. If the protect setting is activated, however, you will not be able to make new recordings until the protect setting is cancelled.

- 1** Insert the disc you want to protect (if the medium you want to protect it not the HDD).

- 2** Press **DISC NAVIGATION**, then press **MENU**.

- 3** Select "HDD Setting" or "Disc Setting"
► For "HDD Setting", select "Protect HDD" then press the confirmation button. Likewise, for "Disc Setting", select "Protect Disc", then press the confirmation button.

The confirmation screen appears.

- 4** Select "Yes", then press the confirmation button.
- Select "No" to quit protecting.
 - To cancel the protect setting, repeat the same steps to select "Unprotect HDD" or "Unprotect Disc" in step 3.

Checking the Remaining Recording Capacity on the Medium

You can check the available recording space on the HDD or a BD/DVD (remaining recording duration) for recording movies, or on a memory card (the number of recordable stills) for recording stills, in the LCD monitor.

1

Insert the medium you want to check (except for the HDD).

2

Press **DISC NAVIGATION**, then press **MENU**.

3

Select "HDD Setting", "Disc Setting", or "Card Setting" ► "Capacity", then press the confirmation button.

The information of the chosen media appears on the screen.

4

After checking the information, press **DISC NAVIGATION**, or press ■ twice.

The display returns to recording pause screen.

HDD BD-RE BD-R RAM RW(VR) RW(VF) R +RW CARD

Use the GUIDE button for help! (p.10)

Connecting to Your TV for Viewing

■ Connecting to a TV

The connection method differs depending on the type of video input terminal that your TV is equipped with. Connection methods in order of best image quality are as follows:

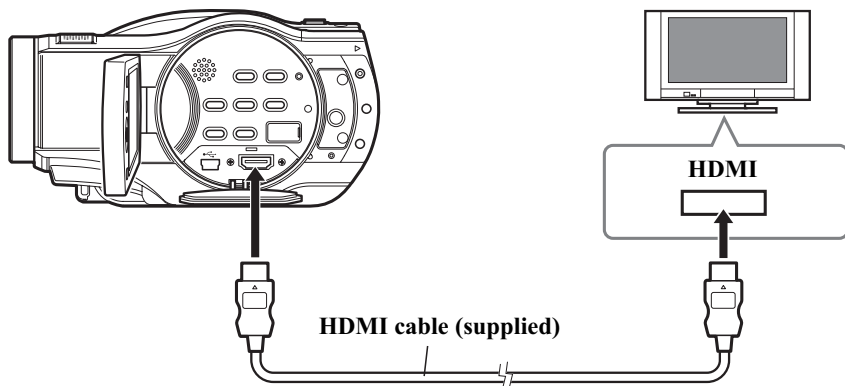
HDMI terminal → **S-Video terminal** → **Video terminal**

Notes

- Before connecting, always turn down the volume of your TV set, to prevent feedback noise (howling) from your TV speakers.
- Insert the connector cables straight into the terminals. Inserting them at an angle may cause the terminals to break.

Connecting the camcorder to your TV's HDMI terminal

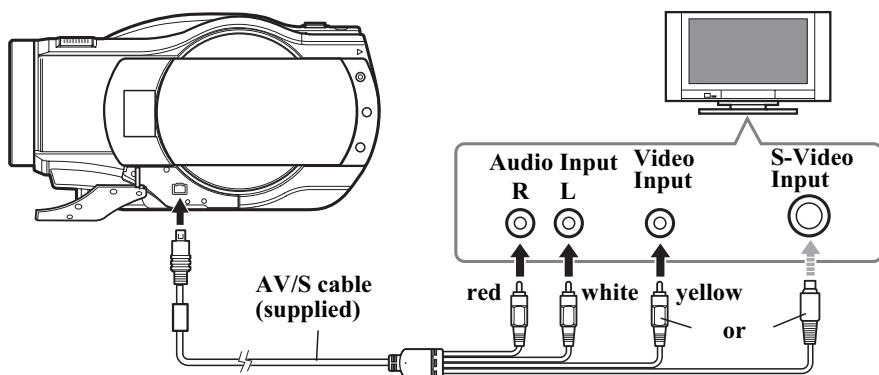
The HDMI connection provides the highest quality digital image and sound signals to your TV through a single cable, without degradation.



Notes

- 1080i signals are output from the camcorder's HDMI OUT terminal. When the camcorder is connected to a TV which is not compliant with 1080i signals, the message "Playback error has occurred. Change the connection terminal." appears in the camcorder's LCD display. If the camcorder is recording or playing when this message is displayed, the operation stops. In this case, reconnect the cable through another method such as by using the S video or video terminal. (See also "Troubleshooting" (p.148).)
- If the camcorder is connected to the TV through the HDMI terminal, audio will not be output from the camcorder other than during playback.

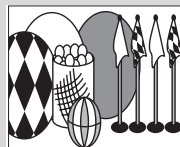
Connecting the camcorder to your TV's S video terminals or video terminals



* Do not connect anything to the camcorder's HDMI OUT terminal.

Note

If you connect a standard (aspect ration 4:3) TV which is not widescreen television, the image appearing on the TV screen will be vertically distorted like the illustration on the right.



■ Viewing on your TV

- 1 Turn on the TV and switch the TV input to the terminal where the camcorder is connected.
 - Refer to your TV's operation manual on how to switch the TV input.

- 2 Turn on the camcorder.

The image shown in the camcorder's LCD monitor appears on the TV screen, allowing you to view playback, recording, and editing on the large screen of your TV.

- If the camcorder is connected to a TV through the HDMI OUT terminal and another image terminal at the same time, the image is output only through the HDMI OUT terminal.

Hints

- Volume can be adjusted on your TV.
- When operating the camcorder while viewing your TV screen, using the supplied remote control is convenient. However, if you are using other Hitachi-brand A/V devices, they may be operated by the camcorder's remote control. In this event, change remote control code.

Notes

- If you have a wide-screen TV (screen ratio 16:9), and the TV is set to wide mode, the disc navigation screen may not fit within the TV screen. In this case, change your TV's wide mode setting. (Refer to your TV's operation manual.)
- Do not leave the camcorder's menu screen and disc navigation screen displayed on your TV screen for too long. Doing so may cause damage (ghosting) on your TV screen.

Viewing on Other Players/Recorders

Before Playing Back a BD/DVD on Another BD/DVD Recorder/Player (Finalising)

Before playing back a BD/DVD recorded or dubbed on this camcorder using another BD/DVD recorder/player, it is necessary to “finalise” it (except for BD-RE and DVD-RAM which can be played on its compatible recorders/players without finalisation).

Notes on Finalisation

- Do not insert a DVD which was recorded or dubbed, but not finalised, on this camcorder into another recording device, such as a DVD recorder. The recorded data may be damaged.
- Although discs recorded on this camcorder can be played back on recording/playing devices which comply with specific discs or recording modes, playback of all discs under all conditions is not guaranteed. If playback is not possible, use this camcorder to play back your disc.
- Playback may stop for a moment temporarily between scenes while playing on a BD/DVD recorder/player.
- If you record or finalise a BD-R/DVD-RW (VF mode)/DVD-R which was recorded or dubbed, but not finalised, on this camcorder using another BD/DVD camcorder, the recorded data may be damaged.
- A BD-R/DVD-RW/DVD-R/+RW edited and finalised on a computer or finalised on other BD/DVD recorder may not be playable on this camcorder, depending on the editing software used or the recording conditions of the disc.
- If you insert a DVD-R recorded on another Hitachi camcorder into this camcorder, the disc navigation screen will appear automatically. You cannot record or finalise such discs using this camcorder.
- Do not insert a BD-R/DVD-RW/DVD-R recorded, but not finalised, on a recorder manufactured by a company other than Hitachi into this camcorder. Doing so may make the disc unusable.

To play back a disc recorded on this camcorder using another BD/DVD recorder/player, refer to the table below. (Please also read the instruction manual for the playback device.)

BD-RE	Playback is possible on a BD recorder/player compatible with 8 cm discs and recording format specified on p.176. For BD-R, it is necessary to first finalise it on this camcorder (p.120) before playback.
BD-R	
DVD-RAM	Playback is possible on a DVD recorder/player compatible with 8 cm DVD-RAM/DVD-RW (VR mode)/+RW discs. Finalisation is not needed.
DVD-RW (VR mode)	
+RW	
DVD-RW (VF mode)	Playback is possible on a DVD recorder/player compatible with 8 cm DVD-RW/DVD-R discs. It is necessary to first finalise it on this camcorder (p.120) before playback.
DVD-R	

To play back a BD-RE/ DVD-RAM/DVD-RW (VR mode)

1

- Insert the disc into the BD/DVD recorder/player and play it back.
- See the instruction manual for the BD/DVD recorder/player.

To play back a BD-R/ DVD-RW (VF mode)/DVD- R/+RW

1

Finalise a recorded BD-R/DVD-RW (VF mode)/DVD-R/+RW.

- You must finalise a disc to play it back on a BD/DVD recorder/player.
- Be sure to finalise the disc recorded on this camcorder using this camcorder (p.120).
- No further data can be recorded on a finalised disc.

2

Insert the disc into the camcorder and play it back.

- See the instruction manual for the BD/DVD recorder/player.

Notes

- When playing back a disc on another device, the disc navigation display differs from the one on this camcorder.
- There may be a case that finalisation is needed for a DVD-RW (VR mode).
- Do not insert a DVD-RW (VR mode) disc that was recorded on this camcorder into a device that does not conform to 8 cm DVD-RW (VR mode). Doing so may make the disc unusable.

- A recorded +RW is automatically finalised when it is removed from the camcorder even if you do not use the disc navigation function to finalise it (auto-finalise). An auto-finalised +RW can be played back on a DVD recorder/player, etc., but no DVD video menu will appear. To display the DVD video menu on a DVD recorder/player, etc., finalise the +RW using the disc navigation function before playing it back on a DVD recorder/player, etc.
- A +RW with a shorter recording time may not be playable on a DVD recorder/player, etc. if it has been auto-finalised. In this case, use the disc navigation function to finalise the +RW.

BD-R +RW(VR) +RW(VF) R +RW

Finalising a Disc

Before you begin

You must finalise a BD-R/DVD-RW (VF mode)/DVD-R/+RW recorded/dubbed on this camcorder before playing it back using a BD/DVD recorder/player compatible with 8 cm discs.

To display the DVD video menu when playing back a +RW disc on another DVD recorder/player, finalise it using the disc navigation menu first.

Note that no further recording/dubbing is possible for a finalised BD-R/DVD-R.

Likewise, no further recording/dubbing is possible for a finalised DVD-RW (VF mode)/+RW, though, you can unfinalise it to enable further recording/dubbing.

There may be a case for a DVD-RW (VR mode) that finalisation is needed, however, further recording/dubbing is possible without unfinalising it.

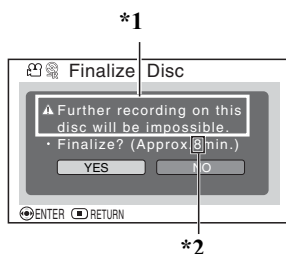
- 1 Connect the AC adapter/charger to power the camcorder.
 - You cannot finalise if a battery pack is used as a power source.
- 2 Press **DISC NAVIGATION**, and then press **MENU**.
- 3 Select "Disc Setting" ► "Finalize Disc", then press the confirmation button.
A confirmation screen for finalisation appears.

Select "YES", then press the confirmation button.

The message showing that the disc is being finalised will appear, and then the disc will be finalised.

When finalisation is complete, the disc navigation screen will appear.

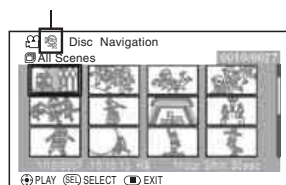
- "F" appears on the disc navigation screen for a finalised disc.



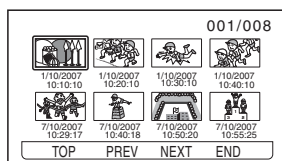
4 *1 Displayed only when a BD-R/DVD-R is used

*2 Varies depending on the length of recordings.

Finalised BD/DVD



The screen below is an example when a DVD-RW (VF mode)/DVD-R/+RW is viewed on a DVD player



- No menu will be displayed when playing a BD.

● Using the FINALIZE button to finalise a disc

Press **FINALIZE** while recording pause or the disc navigation screen is displayed. A confirmation screen for finalisation appears. Select "YES", then press the confirmation button to start finalising.

Notes

- If the disc in the camcorder has already been finalised, "Finalize Disc" does not appear in the menu.
- The time required to finalise that appears on the "Finalize Disc" screen is only for reference.
- In case of a DVD-R, it takes longer to finalise it if recording length is short.
- For a DVD-RW/+RW which has previously been finalised, the next finalisation may be quicker.

Unfinalising a Disc

You can unfinalise a DVD-RW (VF mode)/+RW finalised on this camcorder so that additional recording can be done on it.

1 Press **DISC NAVIGATION**, and then press **MENU**.

2 "Disc Setting" ► "Unfinalize Disc", then press the confirmation button.
A confirmation screen for unfinalisation appears.

3 Select "YES", then press the confirmation button.
The message showing that the disc is being unfinalised will appear, and then the disc will be unfinalised.

Hint

A finalised DVD-RW (VR mode) can be recorded as is, without being unfinalised.

About the software included

The PC connection cable and CD-ROM software supplied with the camcorder will allow you to use the movies and stills recorded on this camcorder on your PC.

The included CD-ROM contains Windows software.

ImageMixer 3 HD Edition for BDCAM

You can transfer the images recorded on this camcorder to your PC, play back the images, and create libraries for the images.

Moreover, you can record these images to a BD in Hi-Vision image quality, or create a DVD-Video (DVD-RW/DVD-R) or DVD-VR (DVD-RAM/DVD-RW) which can be played back on other devices.

Notes

- BD-R/DVD-RW/DVD-R recorded on this camcorder must be finalised on this camcorder before using them in your PC.
- Discs such as AACs, CPRM, or CSS which are copyright protected are not compatible with the software supplied with this camcorder.

- Although discs created using the software supplied with the camcorder can be played back on devices which are compatible with those discs, playback on all devices is not guaranteed. Playback may not be possible depending on the playback device or disc condition.
- No data can be written to the HDD, disc, or SD memory card in this camcorder when it is connected to PC.
- ImageMixer 3 HD Edition cannot create +RW.

The supplied software is compatible for Japanese, English, German, French, Spanish, Italian, Chinese (simplified characters) users.

This manual provides display screen descriptions using Windows XP as examples.

Before opening the software CD-ROM, please read "Be sure to read the following before opening the package of CD-ROM" (p.183).

PC requirements

OS	Windows® XP Home Edition/Professional SP2 Windows Vista™ * 64-bit Edition is excluded. * To use this software, you must login as administrator.
PC	IBM® PC/AT® adapter pre-installed with the above OS
CPU	Intel® Pentium® D 2.8 GHz or greater Intel® Core 2 Duo 1.66 GHz or greater (Intel® Core 2 Duo 2.66 GHz or greater is recommended.) * Operation is not guaranteed for PCs to which any alteration such as overclocking is applied from original specifications.
Memory	• 512 MB or greater (1 GB or greater is recommended)
HDD	• 300 MB or more free space (necessary to install the application). • At time of disc creation, approx. 2 times the free space of the disc to be created is required.
USB	USB 1.1 or 2.0 free port is necessary. (May not operate if the camcorder is connected through a USB hub.)
Others	• Display screen of 1024×768 pixel, 16 bit (High colour) or greater. • Graphics accelerator compliant with Direct X® 9.0c or later version. (Graphics accelerator compliant with PCI Express ×16 is recommended.) • Sound card compliant with Direct Sound.

Notes

- The supplied software is not compatible with Mac OS.
- Even when the recommended system environment is satisfied, there are instances when Hi-Vision quality images may not play back smoothly. Moreover, editing of Hi-Vision images may require extended time to complete.
- Even if your PC satisfies the system requirements, operation malfunctions and limitations in use may occur depending on the combinations of other software and devices you are using.
- Operation will not be guaranteed if you use a self-made computer.

■ Software installation

The content and procedures for installation will differ depending on the OS of your PC.

1

Turn on the power to your PC.


Login to your PC as a user with administrative privileges.

If you are using your PC for other applications, quit all software you are using.

2

Insert the supplied CD-ROM into your PC's CD-ROM drive.

The software installer automatically starts up, and the "Choose Setup Language" screen automatically appears.

If the "Choose Setup Language" screen does not appear, open the drive in which the CD-ROM is contained using Windows' My Computer or Explorer, and double click "".

3

Select the installation language.

Select the installation language, then click "Next".

4

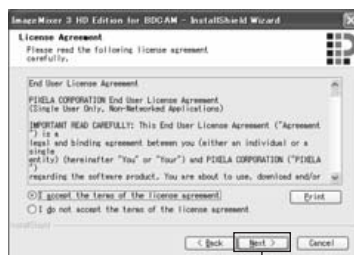
The "ImageMixer 3 HD Edition" installation screen appears. Click "Next".



5

Confirm the software licence agreement.

Read the software licence agreement carefully. If you agree with the terms, select "I accept the terms of the license agreement.", then click "Next".

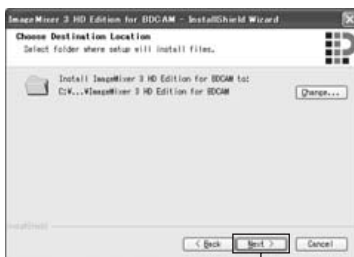


Click

6

Select the installation destination.

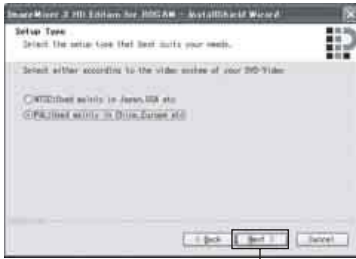
If there is no change to the installation destination, click "Next". If you wish to change the installation destination, click "Change" and specify the installation destination, then click "Next".



Click

Select your country's video system.

7



Click

Perform installation.

Preparations for installation are now complete. Click “Install” to begin the installation process.

8



Click

After installation is complete, the following message screen will appear. Click “Finish” to restart your PC. Software installation is now complete.

9



Click

Note

After completing software installation, Direct X[®] installation may commence depending on your PC. In this event, follow the screen indications to install it.

Important Notice

To “Roxio Easy CD Creator 5” users

Connecting to your PC

When the supplied ImageMixer 3 HD Edition for BDCAM is installed, as there is the possibility that Easy CD Creator 5 may not operate normally, a warning screen will appear after you click “Install”. If you are using Easy CD Creator 5, click “Yes” and quit installing ImageMixer 3 HD Edition for BDCAM. If you wish to use ImageMixer 3 HD Edition for BDCAM, first uninstall Easy CD Creator 5, then install ImageMixer 3 HD Edition for BDCAM.

■ Connecting the camcorder to your PC

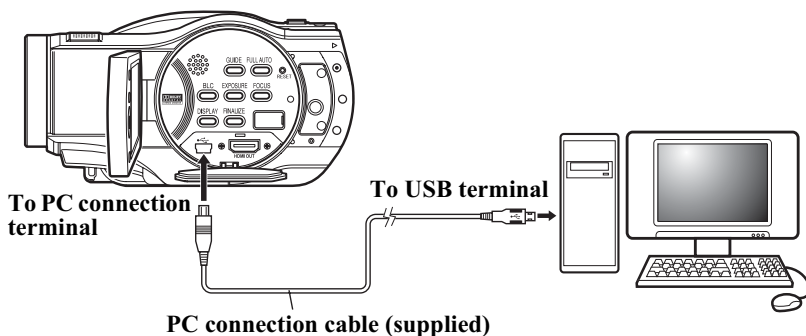
1 Turn on the camcorder power.

When connecting the camcorder to a PC, connect the camcorder to the mains instead of using the battery pack.

2 Choose the medium for connection to the PC (HDD(DZ-BD7HE)/BD/DVD/Card).

The media selected on your camcorder before connecting to a PC can be accessed when the connection is established. (To choose the medium on the camcorder, use the Movie/Stills switch, and for the DZ-BD7HE, the power switch to switch between HDD and disc.)

3 Connect the camcorder to the PC using the supplied PC connection cable.



After the physical connection, the camcorder's LCD monitor goes out and the camcorder-PC connection begins.


The camcorder is automatically recognised from the PC. After recognition, there are occasions when you will be required to restart the PC. In this case, restart the PC according to the indicated instructions.

Notes

- You cannot access to more than one media (HDD/BD/DVD/Card) at the same time.
- The selected medium cannot be changed during PC connection. Detach the PC connection cable from the PC (p.129), then switch the medium.
- During PC connection, none of the camcorder buttons operates.
- When the HDD or BD/DVD is being accessed, the ACCESS/PC indicator flashes in red.
- Note that the CARD ACCESS indicator does not flash even when the SD memory card in the camcorder is being accessed while the camcorder is connected to a PC.
- For precautions when connecting to a PC, see p.138.
- This camcorder cannot be connected to a Macintosh computer.

Camcorder indications on the PC

If the camcorder is set to HDD or BD/DVD mode and connected to a PC, it is recognised as a disc drive.

If the camcorder's Movie/Stills switch is set to " " and connected to a PC, it is recognised as a removable disc.

Hint

The icon and drive name may vary depending on the software environment you are using.

Note

Do not directly handle the files on the HDD or BD/DVD in the camcorder using Windows Explorer. Doing so may cause your valuable image data to be lost and damage to the medium and, thus, the medium becomes unusable. Please use the supplied software.

■ Removing a medium while the camcorder is being connected to the PC

The disc set in the camcorder can be removed by operating the connected PC. Also the BD/DVD and SD memory card can be removed or replaced without turning off the camcorder or disconnecting the PC.

Removing (replacing) BD/DVD

Select the camcorder's drive icon using Windows Explorer or My Computer.

→ Click the right button on your mouse.

→ Select "Eject".

→ The camcorder's disc compartment lid will open.

If you insert a different BD/DVD and close the lid, the BD/DVD will be recognised.

Removing SD memory card

Confirm that the SD memory card is not being accessed by the PC's software. Then remove the SD memory card from the camcorder.

■ Using a built-in disc drive of your PC to read a disc recorded on the camcorder

If your PC's disc drive is compatible with the disc you are using, you can use the disc as is.

Make sure the disc drive is compatible with the disc type you are using.

Notes

- To use a BD-R/DVD-RW/DVD-R/+RW recorded on the camcorder in your PC, finalise the disc using the camcorder (p.120).
- If you wish to write images onto a new BD/DVD-RW/DVD-R using your PC, do not format the disc using the camcorder.
- Some upright or slot load PC disc drives are not compatible with 8 cm discs.
- Adapters to convert 8 cm into 12 cm diameter CDs (for 8cm CDs) are not compatible for use with 8 cm BDs and 8 cm DVDs. Either use the camcorder by connecting it to your PC, or use a disc drive compatible with 8 cm discs.
- ImageMixer 3 HD Edition for BDCAM is compatible for use with disc drives manufactured and sold after 1997, although operation is not guaranteed on all drive types.

■ Before terminating PC connection (removing the PC connection cable) and changing the power switch setting

Detach the PC connection cable from the PC.

Quit the application and click the "Safely Remove Hardware" icon in the task tray at the bottom right of the Windows display screen.

1



Click

2

Select "USB mass-storage device - Drive(E:)" and click "STOP".

The drive name (E:, etc.) will differ according to your PC.



3

Confirm the device again and click "OK".

Detach the PC connection cable.

* If an error occurs during the Safely Remove Hardware procedure, first shut down Windows, then detach the PC connection cable.

Using ImageMixer 3 HD Edition for BDCAM

To launch ImageMixer 3 HD Edition for BDCAM, double click the ImageMixer 3 HD Edition for BDCAM shortcut which was created on your desktop at time of software installation.

* If there is no shortcut for ImageMixer 3 HD Edition for BDCAM on the desktop, select “Start” → “Program” or “All programs” → “PIXELA” → “ImageMixer 3 HD Edition for BDCAM” → “ImageMixer 3 HD Edition for BDCAM”.

A detailed instruction manual for ImageMixer 3 HD Edition for BDCAM is provided as an electronic manual which you can access on your PC. Please refer to this manual for details by clicking “Help(H)” → “ImageMixer 3 Help(H) F1” on the menu at the top of the ImageMixer 3 HD Edition for BDCAM window.

Copying images recorded on the camcorder to your PC and playing them back

ImageMixer 3 HD Edition for BDCAM allows you to transfer movies and stills recorded on the camcorder to your PC and to play them back.

Turn on the camcorder power and connect the camcorder to your PC. Set the camcorder to the medium you wish to use with the PC. Then connect the camcorder to your PC’s USB terminal using the supplied PC connection cable (p.127).

1

To read the BD-R/DVD-RW/DVD-R recorded on the camcorder into your PC, it is necessary to finalise the medium using the camcorder (p.120). Be sure to finalise it before connecting the camcorder to the PC.

2

Launch ImageMixer 3 HD Edition for BDCAM.

Select Hitachi BDCAM*.

When you click on “Hitachi BDCAM” appearing on the left side of the screen, the recorded images are displayed as thumbnails.

3



Click

* “Hitachi BDCAM (HDD)” appears during HDD mode (DZ-BD7HE), and “Removable disc” appears during Card mode.

Import images to the PC.

Select the thumbnail for the image you wish to store, then click “Import”. The PC starts importing the image(s).

4



Click Select the image(s) you wish to store.

Hints

- To select multiple files, click on the thumbnails while holding down the “Shift” key to select consecutive files. Or to select nonconsecutive files, hold down the “Ctrl” key and click another thumbnail.

- The images are stored in the IMxLibrary folder in My Documents.
To change the image storage location, select “Settings” → “Preferences...” , then change the “Library destination settings” from the ImageMixer 3 HD Edition for BDCAM menu.

Note

Importing Hi-Vision images will take longer compared to importing standard quality images.

Check the images imported to the PC.
Click “Library” to display the thumbnails of the imported images.

5



Click

Play back the imported images.

Click on the image you wish to play, then click “Playback” at the bottom of the screen.

The image will be played back on a separate screen.

6



Click

Choose an image to play back.

Note

Even if you are using a PC which satisfies the recommended system environment requirements, there may be cases where the Hi-Vision images are not played back smoothly.

Organize the images imported to the PC

As the images imported to your PC using ImageMixer 3 HD Edition for BDCAM increase, organizing your images will become difficult. In this event, create an album and organize your image files.

ImageMixer 3 HD Edition for BDCAM will allow you to create two types of albums—a normal album or a smart album.

Even if you delete the album or smart album, the original images registered to the albums will not be erased and, thus, remain in the library.

Difference between the album and smart album

• Album

Album is a function which allows you to select your favourite images and compile them into a single album—just like real picture albums.

For example, you can create an album called “sports day” in which you can select and store your favourite sports day images. Then when you feel like looking at your sports day images, you can immediately play them back or even record the album to disc.

• Smart album

Smart album is a function which allows you to utilise the properties of electronic data to automatically assemble images. By specifying the conditions, image files which satisfy those conditions are automatically assembled.

For example, you can display a list of images recently imported to your PC,

arrange the images according to recording date, and so on.

Creating an album to organize your images

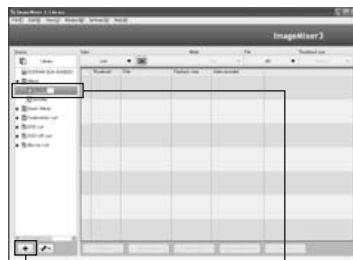
- 1 Launch ImageMixer 3 HD Edition for BDCAM.

Create a new album.

Click on the “+” button at the screen bottom left to add an “Untitled” album.

Click on “Untitled” to select it, then click on it again to change the album name. Enter the desired album name.

2



Click

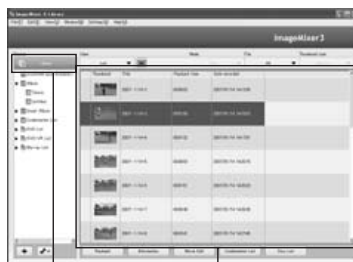
Click

Choose images from the library.

Click on the library so that the list of image thumbnails appears.

Choose the images you wish to add to the album by clicking on the thumbnails for these images.

3



Click

Select images

Hint

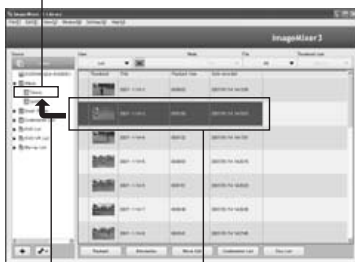
To select multiple files, click on the thumbnails for consecutive files by holding down the “Shift” key, or for non-consecutive files by holding down the “Ctrl” key.

Add image files to your album.

Drag and drop the images you have chosen in step 3 to the album you created in step 2 so that the images are added to the album.

Designated album

4



Drag and drop

Choose images you wish to add to the album.

Hint

Drag and drop the thumbnails for the images within the album to change the order of the images within an album.

Creating a smart album to automatically assemble images

1

Launch ImageMixer 3 HD Edition for BDCAM.

Create a new smart album.

From the “File” menu, select “New Smart Album...”.

2



Specify conditions.

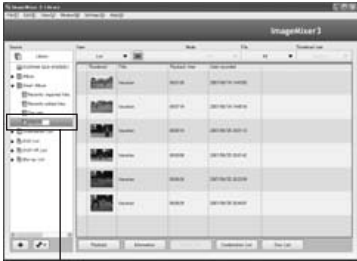
Specify the conditions for the images you wish to assemble for your smart album. Specify conditions such as the image recording date, image title, and so on, then click “OK”. The specified images are automatically searched and the images which match the conditions are registered to the new smart album.

3



Create a name for your smart album.
The smart album created in steps 2 and 3 is added as an “Untitled” smart album. Click on “Untitled” to select it, then click on it again so that you can change the name of the smart album.

4



Click

Creating a disc with the images recorded by the camcorder

ImageMixer 3 HD Edition for BDCAM allows you to use the imported images and create a BD to store Hi-Vision quality images, or DVD-Video or DVD-VR which can be viewed on a common DVD player/recorder.

The following are procedures to create a disc from the images stored to the PC using ImageMixer 3 HD Edition for BDCAM.

1

Launch ImageMixer 3 HD Edition for BDCAM.

Load a disc into the disc drive.

Insert a disc on which images are to be written.

2

Note that the quality of images will differ as indicated in the table below according to the type of the disc chosen.

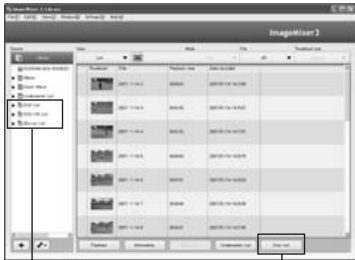
Disc type	Image quality type	List created
BD-RE/BD-R	Hi-Vision image quality	Blu-ray creation list
DVD-RAM/ DVD-RW	Standard image quality (DVD-VR)	DVD-VR creation list
DVD-RW/ DVD-R	Standard image quality (DVD-Video)	DVD creation list

Table 1: Disc type and its contents

Create a disc creation list

Click on “Library”, then click “Disc List” at screen bottom right. You can select from three types of disc creation lists. Using Table 1 as a reference, select a disc creation list suited to the disc you inserted into the disc drive in step 2.

3



Created list

Click

Hint

To make a disc creation list from an album or smart album, while the album or smart album is displayed, click on “Disc List” at screen bottom right and select a list suited to the disc you are creating.

4 Set up the disc you are creating.

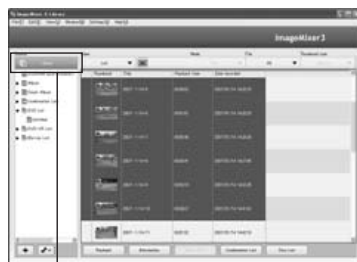
Double click on the created list to display a list setup screen. Set the image quality and menu (only in the case of DVD-Video) here.



e.g. DVD-Video's list setup screen

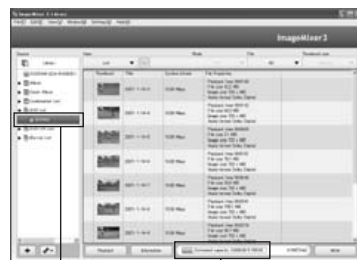
Register images to the disc creation list.

Click on “Library” to display an image list. Then drag and drop the images you wish to store to disc into the disc creation list. Repeat this procedure to add the other images to the list.



Click

- 5** Clicking on the disc creation list will display the estimated necessary disc capacity at the screen bottom. Add images to the disc creation list while making sure that the total amount of data does not exceed the maximum disc capacity. If the disc capacity is exceeded, as dividing and writing the data to multiple discs is not possible, delete scenes from the list.



Click

Estimated disc capacity

Hint

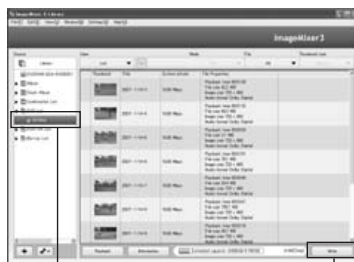
To select multiple files, click on the thumbnails while holding down the “Shift” key to select consecutive files, or the “Ctrl” key to select non-consecutive files.

Note

As image conversion must be conducted if you create a disc by adding standard quality images to a Blu-ray creation list, or hi-vision quality images to a DVD creation list or DVD-VR creation list, image quality degradation will occur and disc creation will require longer time.

Write to the disc.

Click on and display the disc creation list created in steps 3–5. Then click on “Write” at screen bottom to display the write setup screen.



Click

Click

6



Click

Confirm the settings and click “Create” to start writing to the disc. When writing is complete, the disc will automatically eject from your PC.

Notes

- Setting “Disc Erase” in the write setup screen will delete all data on your disc. Confirm the contents of your disc sufficiently before conducting this procedure.
- If you write images which do not comply with the standards of your disc, those images will be re-encoded and image quality will degrade.

■ Uninstalling the software

Click “Start”, then “Control Panel”, and then click (or double click) “Add or Remove Programs”. From the displayed application list, select “ImageMixer 3 HD Edition for BDCAM”, then click the “Change/Remove” button. If confirmation dialog is prompted, click “Yes”. Software uninstallation will begin. Complete software uninstallation following the instructions shown on the screen.

Notes

- After uninstalling the software, restart your PC.
- Administrative privileges are required to conduct uninstallation.

■ Contact the following

- **Inquiries on software provided with this camcorder should be directed to:**

PIXELA PC Software Support Centre

UK, Germany, France and Spain
+800-1532-4865 (Toll-free)
Other countries
+44-1489-564-764
Languages available: English,
French, German, Spanish

URL:<http://www.pixela.co.jp/oem/hitachi/e/index.html>

- **For inquiries on connections between PC and this camcorder:**

HITACHI Camcorder PC Software Support Centre

URL:<http://dvdcam-pc.support.hitachi.ca/>

Precautions When Connecting to a PC

When connecting the camcorder to a PC, use the AC adapter/charger as a power source.

- If the camcorder power is cut during data transfer, your valuable recorded data may be lost. If this occurs while writing to disc, the disc will no longer be usable.

While accessing the camcorder from a PC, do not plug or unplug the cables.

- If you plug or unplug the PC connection cable (supplied) or the power source (mains lead and DC power cord) while the ACCESS/PC indicator is flashing, your valuable recorded data may be lost. If this occurs while writing to disc, the disc will no longer be usable.

Make sure the camcorder does not overheat. (Operations conducted with the camcorder and PC connected should be limited to a rough standard of approx. 30 minutes within environmental conditions at approx. 30°C.)

- If the camcorder overheats, camcorder operations may not function properly. In particular, if an error occurs while writing to BD-R or DVD-R, the disc will no longer be usable. Make sure to prevent the camcorder from overheating. As extended time will be required to import lengthy scenes recorded to the HDD to your PC, make sure that the camcorder does not overheat.

When connecting the camcorder to your PC, detach all cables or camera accessories (external microphone, etc.) other than the PC connection cable and AC adapter/charger.

Camcorder connection to your PC is not possible when the camcorder power is "OFF".

The supplied software does not import camcorder's editing features such as the fade settings but only the original data.

Although reading data from the camcorder or writing data to the camcorder may be possible using software other than the supplied software, operation is not guaranteed.

Although we have confirmed that discs created using the supplied software can be played back on devices compliant with those respective disc types, playback on all devices is not guaranteed. There are instances when playback is not possible depending on the playback device or disc recording condition.

Optional Accessories

CAMERA ACCESSORIES

Wide conversion lens (DZ-WL43) (p.72)

Tele-conversion lens (DZ-TL43) (p.72)

- When using camera accessories, be sure to read the instruction manuals for each accessory.

POWER SUPPLY

Battery (DZ-BP14SW)

Battery (DZ-BP21SW)




- Refer to the catalogue for details.
- The models and specifications of the optional accessories shown on this page are subject to change, and their production may be discontinued.

Error Messages

If an error message appears while operating the camcorder, refer to the following table for details and remedies. Messages are arranged in alphabetical order.

Message	Cause & Troubleshooting	Reference page
(1) Disc is not formatted. Format the disc now? (2) Disc Format. Select record format. (Displayed only when DVD-RW is used.)	These messages appear when a new BD-RE/BD-R/DVD-RW/+RW is inserted.	43
(1) Found partially damaged video. Recover video data? (2) Found damaged video. Recover video data? (3) Recovering... It may take a long time. Continue recovery?	<p>The system cannot normally complete writing of a file if the power is turned off for some reason during recording or editing. Selecting "YES" will automatically repair the video file. If you quit recovery by pressing ■, the same message will appear when the camcorder is turned on next time. (Do not remove the disc while the camcorder is recognising it. Removing the disc will deactivate the file repair function.)</p> <p>Follow the instructions on screen, taking note of the following cautions:</p> <ul style="list-style-type: none"> • Be sure to use the AC adapter/charger to power the camcorder when repairing data. Repair is not possible using a battery. If a battery is attached, turn the power switch off, connect the AC adapter/charger, and then turn the power back on and follow the on-screen instructions. • If message (1) appears when using the HDD, a battery can be used for repair (if the battery charge indicator shows more than half charged). • Repair will normally take several minutes, but it may take up to one hour. • Data may not be repaired, depending on the timing when power was turned off. • Data may not be repaired normally if data recorded on another recorder is mixed in. • The repaired data may differ from the original recorded content due to deleted defects. • Since the date/time for repair is added to the repaired data (only the corrected portion for partial repair), the original date/time information will be lost. • See *1 on p.147 	—

Message	Cause & Troubleshooting	Reference page
All scenes are already dubbed. Please use other Dub Mode.	This message will appear if you attempt a “New” dubbing when there are no un-dubbed scenes on the HDD. Turn off the dubbed marks on scene(s) you want to dub, or choose another dubbing method.	87, 95
Auto finalizing... Please wait...	This message will appear with a +RW when it is removed after recording, or the last recorded scene was deleted. The auto-finalised +RW can be played back on a DVD recorder/player.	120
Cannot add some of control information	The number of entered scenes has reached the limit that can be entered, so the control information for generating thumbnails cannot be added. Combine several scenes or delete them.	107–108
Cannot combine scene.	Only consecutive scenes can be combined.	108
Cannot combine scenes with different recording dates. Create Playlist first and then combine scenes.	Scenes on different recording dates cannot be combined. Create a Playlist first, and then combine such scenes on the playlist.	103, 108
Cannot combine. Select multiple scenes.	Select a range of at least 2 consecutive scenes to be combined.	108
Cannot delete scene. Delete other scenes first and then retry.	Part of a divided scene is selected for deletion.	107
Cannot divide. Too short to divide.	This message will appear when the scene is extremely short due to repeated divisions.	107
Cannot divide. Unselect multiple scenes.	Division was attempted when multiple scenes were selected.	107
Cannot execute. Change display category to ALL.	This message will appear if you attempt to combine or move scenes when “Category” in “Others” in the menu is set to “Dubbed” or “Un Dubbed”.	95
Cannot finalize disc in HDD mode. Please finalize disc in BD/DVD mode.	This message will appear if you press FINALIZE when the power switch is set to “HDD”. Set the power switch to “BD/DVD”, and then finalise the disc.	26
Cannot read disc. Check dirt/crack/both-sides contrary/inserted correctly.	Error occurred while the disc was being recognised. Make sure that there is no scratch or dirt on disc, that the surface/back of disc is not reversed, and that the disc is firmly pushed against the turntable. See *3 and *4 on p.147.	41, 160

Message	Cause & Troubleshooting	Reference page
Cannot record video. Set Movie/Stills switch to “Movie”.	This message will appear when the record button is pressed with the movie/stills switch set to “  ”. Set the move/stills switch to “  ”.	47
Cannot sleep mode.	<ul style="list-style-type: none"> The camcorder enters sleep mode when QUICK START is pressed only while in recording pause mode. Check the following causes: <ul style="list-style-type: none"> there is no disc in the camcorder while the power switch is set to “BD/DVD”. there is no SD memory card in the camcorder while the power switch is set to “SD CARD”. the HDD, disc, or card does not have sufficient remaining free space. An usable disc or card is inserted. the disc navigation screen is appearing. during playback. 	48
Cannot take still image. Set Movie/Stills switch to “Still”.	<ul style="list-style-type: none"> This message will appear when PHOTO is pressed with the movie/stills switch set to “”. You cannot record stills on HDD/BD/DVD. Use SD card to record stills using this camcorder. 	53
Card almost full.	Remaining space is only enough to record less than 10 stills. Delete unnecessary stills and try the card, or use another card.	107, 178
Card error has occurred.	<ul style="list-style-type: none"> The card terminals may be dirty. Wipe off dirt, and try the card again, or use another card. Data other than still image may be included. Use another card. 	40
Card error has occurred. Format the card now?	The card may have been formatted on a PC, or formatting may have been interrupted. Choose “YES” to format the card.	112
Card error has occurred. Formatting is not complete.	The card may be damaged. Try again or use another card.	40
Card error has occurred. Keep card inside & restart.	Card error could have occurred during editing of scenes. Turn off the camcorder with the card inserted, connect the AC adapter/charger, and then turn it on again.	45
Card full.	Delete unnecessary stills, or use another card.	107, 178
Card is not formatted. Format the card now?	Was the card formatted on PC? Choose “YES” to format the card.	112
Check card.	Check the card inserted in the camcorder. The card must be either locked or incompatible with the camcorder.	40

Message	Cause & Troubleshooting	Reference page
Check disc.	A disc unusable on this camcorder may have been inserted or the disc may be damaged. Make sure that the type of disc is correct, and that the disc is not write-protected.	38, 113
Check HDD	Check to see whether the HDD is write-protected. Otherwise, the HDD may be destroyed.	113
Control Information Error.	Scenes may have been edited on another device, etc. Update the control information.	152
	<ul style="list-style-type: none"> • Use another disc. • See *3 and *4 on p.147. 	—
Disc error has occurred.	<ul style="list-style-type: none"> • Use another disc. • See *3 and *4 on p.147. 	—
	<ul style="list-style-type: none"> • A mismatch in recording information may be caused when editing is done on another device. Format the disc or use another disc. • Formatting the disc will erase all data on it. 	112
Disc error has occurred. Finalizing is not complete.	<ul style="list-style-type: none"> • Disc error occurred during finalising, and finalising failed. Replace the disc. • See *3 on p.147. 	120
Disc error has occurred. Format the disc now?	<ul style="list-style-type: none"> • Was the disc formatted on a PC, or formatting interrupted? Choose “YES” to format the disc. Formatting the disc will erase all data on it. • See *2 on p.147. 	112
Disc error has occurred. Formatting is not complete.	The disc may be dirty. Remove the disc and wipe off fingerprints, dust, etc., before reusing it, or use another disc. This message may also appear if you insert a disc for which formatting was interrupted midway. In this case, try formatting the disc or use another one.	112, 160
Disc error has occurred. Keep disc inside & restart.	Disc error could have occurred during editing of scenes. Turn off the camcorder with the disc being used in it, connect AC adapter/charger, and then power the camcorder again. Repair of scenes will be tried.	45
Disc error has occurred. Turn the power switch off once and then set it to “BD/DVD”.	This message appears if a disc error has occurred during dubbing. Leave the disc inserted and turn the power off. Connect the AC adapter/charger to the camcorder and set the power switch to “BD/DVD”.	26
Disc error has occurred. Unfinalizing is not complete.	This message will appear when a disc error occurs during the unfinalisation process. Replace the disc.	122

Message	Cause & Troubleshooting	Reference page
Disc must be finalized before it can be played on another device.	<ul style="list-style-type: none"> This message will appear if you remove a BD-R/DVD-RW (VF mode)/DVD-R disc that has not been finalised. See *5 on p.147. 	120
Drive overheat. Please retry later.	The temperature inside the camcorder is too high. In this case, proper writing/reading HDD/disc may not be possible. Turn off the power, then wait for a while.	—
End of card.	No more recording on this card can be done. Delete unnecessary stills or use another card.	107, 178
Error occurred. Please replace disc or format disc.	<ul style="list-style-type: none"> Error occurred while recovering DVD-RAM/DVD-RW. Format the disc. If the same message persists after you format the disc, use another DVD. Note that all data on the disc will be erased if the disc is formatted. See *2 on p.147. 	112
Error occurred. Please replace disc.	An error has occurred with the inserted DVD which cannot be repaired. Replace the disc.	—
Failed to recover video data. Corrupted scenes have been deleted and disc is usable again.	Error occurred while recovering HDD/BD. Although the recovery was unsuccessful, you can continue using HDD/BD.	—
Finalize may not be complete. Finalize again now?	This message will appear when power is supplied again and the disc is reinserted after power was shut off during finalisation due to a power failure, etc. Choose “YES” to make sure finalising is complete.	120
HDD error has occurred.	Format the HDD before using the camcorder. Formatting the HDD will delete all data recorded on it.	112
HDD error has occurred. Format the HDD now?	Did you interrupt the formatting of the HDD? Choose “YES”, and then format the HDD. Formatting the HDD will delete all data recorded on it.	112
HDD error has occurred. Formatting is not complete.	Did you interrupt the formatting of the HDD? Press RESET to execute system reset.	163
HDD error has occurred. Restart.	<p>An HDD error probably occurred during editing of a video file.</p> <p>Turn off this camcorder, and then connect the AC adapter/charger to power it again.</p> <p>The video file will be repaired.</p>	45
HDD/Disc almost full.	The remaining free space of the HDD/disc is less than one minute for video. Delete unwanted scenes, or use another disc.	107, 177
HDD/Disc has no image.	This message will appear when an attempt is made to dub, playback, or editing when no scene has been recorded.	—

Message	Cause & Troubleshooting	Reference page
HDD/Disc has no Playlist.	The Playlist menu was selected, but no playlists are stored.	104
HDD/Disc includes protected scenes. Delete scenes?	The disc may be software protected from a device other than this camcorder. To release, use the device that executed the software-protect.	—
Insufficient free space available on disc. Delete unnecessary scenes.	This message will appear when you attempt to create/edit a playlist or divide a movie while the disc has insufficient free space. Delete unnecessary scenes from the disc.	107
Insufficient free space available on HDD. Delete unnecessary scenes.	This message will appear when you attempt to create/edit a playlist or divide a movie while the HDD has insufficient free space. Delete unnecessary scenes from the HDD.	107
Low temperature. Cannot use BD. Turn off power, then turn on again.	This message appears when the camcorder's built-in BD drive is below the operating temperature range. However, it may be possible to record on a DVD even when this message appears.	—
No more scenes. Playlist was deleted.	<ul style="list-style-type: none"> • All scenes were deleted from the playlist. • If all registered scenes of a playlist are deselected, the playlist will be deleted. 	—
Playlist over limit. Cannot create Playlist.	The maximum number of playlists is already reached. No more playlists can be created or copied.	102
Please insert disc.	This message may appear when the camcorder or disc is moved from a cold place to a warm place. Condensation has occurred on the lens or the HDD/DVD drive. Do not remove the disc; leave the camcorder turned off in a dry place for 1–2 hours.	158
	Insert a disc.	41
	The disc is not inserted correctly. Push the disc against the turntable at the centre until a click is heard. See *3 and *4 on p.147.	41
	Is the disc inserted upside down? Insert the disc with the recording side facing inward to the camcorder body.	41
Same scenes on Playlist will be deleted. Delete scenes?	This message appears when deleting a scene or scenes by displaying all scenes or switching to the display arranged by date, if any playlist contains the scenes. (The message will not appear if the scenes are deleted from playlists.) Deleting scenes will also delete the corresponding scenes in the playlists.	107

Message	Cause & Troubleshooting	Reference page
Scene No.xxx is too large to fit on one disc. Divide scene before dubbing, or select “Auto divide: On”.	This message will appear during all scene dubbing if the data size of the scene to be dubbed is larger than the free space on one disc (approx. 30 minutes in SF mode and approx. one hour in HX mode). Divide the scene before dubbing, or select “With auto divide” when you perform dubbing.	87, 107
Scenes over limit. Cannot add scenes.	The number of scenes entered in a playlist has reached the limit that can be entered. Delete unnecessary scenes in the playlist.	102, 105
Scenes over limit. Cannot divide scene.	The number of entered scenes has reached the limit that can be entered. Delete unnecessary scenes in the playlist.	105
Stop processing.	■ was pressed to stop processing of multiple scenes.	—
The temperature of HDD is outside the operating temperature range. Turn off power, then turn on again.	This message will appear if the temperature of the HDD is outside the operating temperature range. Recording on a disc may be possible even if this message is displayed.	176
There was no scene which can be deleted.	This message will appear if you try to delete multiple scenes when all the selected scenes have been locked. Release the lock on scenes before deleting.	107, 110
This disc cannot be used. Please replace disc.	A disc that cannot be used on this camcorder has been loaded. Check the type of disc.	38
This disc is recorded by the NTSC system. Please replace disc.	This camcorder can use only discs recorded in the PAL system. A disc recorded in the NTSC system cannot be used.	—
Unformat disc.	The disc is not formatted or it is damaged. If this message appears, be sure to format the disc on this camcorder before using it. Re-formatting even a disc used on this camcorder may be necessary (formatting will erase all recorded contents on the disc). If this message appears, try to format the disc. If the same message still appears, the disc may be damaged. Use another disc.	112
	See *2 on p.147.	—
Unformat HDD.	The HDD may not be formatted or it may be destroyed.	—
Use AC adapter/charger.	No dubbing, HDD deletion, or disc finalisation is possible with a battery. Use the AC adapter/charger.	45, 87, 120, 162
Use AC adapter/charger. Turn off power.	Scenes cannot be repaired when the camcorder is powered by a battery. If the AC adapter/charger is unavailable in handy place, remove the disc and use another disc. Repair the disc later when you can connect the AC adapter/charger.	45

Message	Cause & Troubleshooting	Reference page
Write protected. Check card.	A card with the erase prevention switch locked is inserted. Unlock the switch.	40
Write protected. Check HDD/disc.	The HDD or disc is write-protected. Use the disc navigation menu to release the protection.	113

*1

- This message may also appear if the disc is dirty. If this message appears when a recorded disc is recognised immediately after it is inserted, do not repair the disc; remove it and then use the provided disc cleaning cloth to clean off the dirt before using it.
- This message may also appear when condensation occurs. In this case, do not repair the disc; turn the camcorder off, wait until it dries out, and then turn it on again.
- If the repair message appears when you turn the camcorder on from off with a disc loaded after recording on it, choose repair.
- If the repair message appears when recording and playback are normally possible with another disc – and no condensation has occurred, and the disc is not dirty – choose repair.

*2

- This message may also appear if the disc is dirty. In this case, do not format the disc. Remove it and then use the provided disc cleaning cloth to clean off the dirt before using it.
- This message may also appear when condensation occurs. In this case, do not format the disc; turn the camcorder off, wait until it dries out, and then turn it on again.
- Formatting will delete all data on the disc.

*3

- This message may also appear when the disc is dirty. Remove the disc and then use the provided disc cleaning cloth to clean off the dirt before using it.
- This message may also appear when condensation occurs. Wait until the camcorder dries out, and then turn it on again.

*4

- This message will appear when a single-sided disc is inserted the wrong way (upside down). Reinsert the disc correctly. (Insert the disc with the label printed surface facing toward the outside.)

*5

- Do not insert a DVD-RW (VF mode)/DVD-R disc that has not been finalised into any DVD recorder. The disc may become unusable.

Troubleshooting

If you have any trouble with your camcorder, first use this troubleshooting guide to try to solve the problem. If the problem persists, consult your dealer. Do not attempt to make any physical repairs yourself.

Power supplies


Symptom	Cause and Correction	Reference page
Battery cannot be charged.	Is the DC power cord connected to the AC adapter/charger? Unplug it.	23
	Is the battery abnormally hot? Remove the battery, leave it for a while to cool down, then charge it. Is the ambient temperature too low or too high? Charge the battery at 10 – 30°C.	—
	Has the battery been unused for a long time? Remove the battery, and then reattach it. If the battery does not charge after trying all of the above, it may be dead. Purchase a new battery.	46
Battery weakens fast.	Are you using the camcorder where the temperature is low? A fully charged battery (DZ-BP14S/DZ-BP14SW/DZ-BP21SW) may be discharged sooner than usual at low temperatures. Keep extra batteries on hand.	44
	Battery may be dead. The performance of the battery will deteriorate if it is used for an extended period of time or frequently. Purchase a new battery.	46
The CHARGE indicator on AC adapter/charger is blinking.	Is the ambient temperature too low or too high? Charge the battery at 10 – 30°C. If the battery is completely drained (for example, if it has not been used for over a year), it may take longer to begin charging. Continue charging: after awhile, the battery may recover enough voltage to begin charging normally and the CHARGE indicator will light.	44

Symptom	Cause and Correction	Reference page
Power turns off immediately after being turned on.	Is the battery charged? Charge it.	23
When power is turned on, the LCD screen will turn on and off.		
The ACCESS/PC indicator is flashing, even though nothing is displayed on the LCD monitor screen.		
Power goes off unexpectedly.	Is Power Save set to "On"? If the camcorder is on battery power and set to "Power Save: On", and is left for up to 5 minutes (default setting) without being operated, it will automatically turn off to save battery power. To restart recording, turn the power off and then turn it on again. You can also specify "Power Save: Off" to stop automatic power off.	68
	Is the camcorder set to the sleep mode? If 30 minutes or more has elapsed with the camcorder in the sleep mode, it will automatically turn off. Set the power switch to "OFF", and then turn it on again.	48
Power cannot be turned off.	Detach the battery or disconnect the AC adapter/charger, then press RESET . And then, turn on the power again.	45, 163
Even if the camcorder is off, opening the cover will cause the ACCESS/PC indicator to flash.	The camcorder will automatically turn on to recognise a disc. Closing the cover will automatically turn the camcorder off again.	41

During recording

Symptom	Cause and Correction	Reference page
Pressing the record button will not start recording.	<ul style="list-style-type: none"> • Check to see whether the proper type of BD/DVD is loaded. • Set the power switch to "HDD" or "BD/DVD". • If the HDD/disc is protected, cancel protection. • No recording can be done on a finalised disc. • Check the remaining free space on the HDD/disc. • If, when using a +RW, recorded scenes are very short or you frequently switch the video quality, recording may not be possible even when the disc has remaining space. 	38, 47, 113, 114, 120

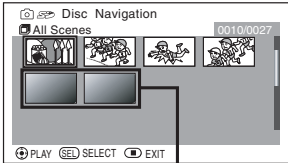


Symptom	Cause and Correction	Reference page
Recording starts but stops immediately.	Is the disc scratched or dirty? Clean the disc. If there is still no improvement, replace the disc.	161
No photo can be recorded.	<ul style="list-style-type: none">• Check to see whether the proper type of card is loaded.• Set the power switch to “”.• If the card is locked, unlock it.• Check the remaining free space on the card.	40, 53, 114
The LCD screen is hard to see.	Has the brightness of the LCD screen been adjusted? Stop recording and adjust the brightness.	68
	Is the camcorder being used outdoors? Use the viewfinder. When using the LCD monitor, adjust its angle so that the LCD screen is not exposed to direct sunlight.	21
A subject appears distorted.	This is not a malfunction. Due to the nature of the image sensor (CMOS sensor), subjects may appear slightly distorted.	—
Horizontal lines appear on the screen.	This is not a malfunction. These symptoms may appear under fluorescent lighting, mercury lamps, sodium-vapour lamps, among others.	—
A bright dot appears on the screen.	This is not a malfunction. A bright dot or bright dots can be seen on a dark subject on rare occasions.	—
The LCD screen appears unevenly.	Did you press the LCD monitor or the area around it? If the LCD monitor is pressed, some distortion will occur. Release your hand and leave the LCD monitor for a while. The LCD screen will recover.	—
Focus is not correct.	Is it difficult to use auto focus with your subject? Focus manually.	73
	Does the manual focus icon appear? The camcorder is set to manual focus. Focus the subject manually, or release manual focus.	73
	Is the dioptre control correctly adjusted if you are using the viewfinder? Adjust the dioptre control.	21
	If the above causes do not apply, turn off the power and turn it on again.	—

Symptom	Cause and Correction	Reference page
An error message for repair appears.	<p>Follow the on-screen instructions to repair.</p> <p>You must connect the AC adapter/charger to the camcorder to make repairs. However, as an exception, if you are using the HDD (DZ-BD7HE) and an error occurs in part of a movie file, you can also use the battery pack for repair (if the battery charge indicator shows more than half charge).</p> <p>Depending on the situation, it could take from a few minutes to several hours for repair. If you wish to start recording immediately, replace the disc, and do the repair later. The removed disc can be repaired after you connect the AC adapter/charger to the camcorder.</p>	45

During playback

Symptom	Cause and Correction	Reference page
Recognition of the disc does not complete.	<p>Is the disc dirty?</p> <p>Use the provided disc cleaning cloth to clean it.</p>	161
Pressing the playback button will not start playback.	<p>Was the image recorded by another device?</p> <p>Playback of some images recorded on other devices may be impossible on this camcorder.</p>	—
	<p>Has a scene been edited on another device?</p> <p>If a scene recorded on this camcorder is edited on another device, playback may not be possible on this camcorder.</p>	—
No playback picture appears on the TV screen.	<p>Is the TV input selector set correctly?</p> <p>Some TVs have multiple video input jacks. Check whether the correct input was selected on the TV to match the connected jacks. If the camcorder is connected to a VCR, set its input selector to “external input (LINE)”.</p>	117
	<p>Is the camcorder connected to the TV correctly?</p> <p>Check the connections.</p> <p>When connected through the HDMI terminal, video will not display for a TV which is not 1080i compliant. Please change the terminal.</p>	115
Recorded pictures appear vertically long.	<p>If you connect the camcorder to a standard (aspect ratio 4:3) TV which is not widescreen television, the image on the TV screen will appear vertically long.</p>	116
Playback picture is momentarily interrupted.	<p>Is the disc scratched or dirty?</p> <p>Clean the disc.</p>	161

Symptom	Cause and Correction	Reference page
No sound.	If you are viewing images on a TV, is the TV volume control set correctly? Adjust the TV volume.	117
Not displayed normally in the disc navigation screen.	<p>BD, DVD-RAM, DVD-RW(VR mode) recorded on this camcorder and edited on another device may not be displayed normally in the disc navigation screen. In this event, use "Update control info."</p> <p>If too much time is required to display the disc navigation screen, try the following.</p> <p>1 Press DISC NAVIGATION, then press MENU.</p> <p>2 Select "Disc setting" or "HDD setting" (for the HDD of DZ-BD7HE) by pressing ◀▶, then press the confirmation button.</p> <p>The "Update control info." confirmation screen appears.</p> <p>3 Select "YES" by pressing ◀, then press the confirmation button.</p> <p>Update of control information will begin. While "Updating..." is being displayed, a black screen may appear (and time may be required).</p> <p>(There are some BD/DVD which cannot be used even by following the above procedures.)</p>	—
The disc navigation screen does not show more than 3,999 stills from the inserted card.	If the inserted card contains more than 3,999 still pictures, only 3,999 stills can be shown in the disc navigation screen. However, it is possible to play back more than 3,999 pictures.	—
Photos on a card cannot be played back.	<p>This camcorder can play back image data recorded onto memory card using other digital cameras conforming to DCF standards. However, depending on the recording condition of the image data taken by other digital cameras, blue thumbnails (see * of the illustration below) appear, and playback of these images may not be possible.</p> <p>DCF (Design rule for Camera File system) is a unified image file format for digital cameras. Image files recorded using digital devices conforming to DCF can be used in these devices interchangeably.</p>  <p style="text-align: center;">*</p>	—

Symptom	Cause and Correction	Reference page
It takes some time to play back photos on card.	Stills with a large number of pixels will take more time to appear.	—

When the camcorder is connected to a PC

Symptom	Cause and Correction	Reference page
No drive icon appears on the PC.	The camcorder is not turned on. Check the power supply.	23
	Turn the PC off and disconnect the PC connection cable. Then turn the PC back on and reconnect the cable.	—
	Make sure the cable is connected properly to both the PC and the camcorder.	127
An error occurs while playing back movies recorded on the camcorder using the PC.	Playing back Hi-Vision (HD) movies requires high data processing power. Quit other applications and play back again.	124
The software does not run correctly on the PC.	Turn the PC and camcorder off, and try again.	—
An error occurs during writing to a disc.	The temperature of the camcorder is too high due to continuous operation. Disconnect the camcorder from the PC, remove the disc from the camcorder, and then turn it off. After a few moments, connect them again and write to a brand-new disc.	129
Transfer of images stops.	Is the disc scratched or dirty? Clean the disc.	161
The BD/DVD drive of the PC cannot be used after the provided software was installed.	Do you use another software application to edit/write BD/DVD? There may be a conflict between that software and the ImageMixer 3 HD Edition for BDCAM software. This problem may be solved if you update the other BD/DVD editing/creating software of your PC.	—
An error appears when starting ImageMixer 3 HD Edition for BDCAM.	Make sure that your PC display adapter (video card) conforms to Direct X® 9.0c.	124

Symptom	Cause and Correction	Reference page
Movies are not recognised by ImageMixer 3 HD Edition for BDCAM on the PC.	Make sure the power switch of this camcorder is set to “HDD” or “BD/DVD”.	15
The DISC EJECT switch does not work when the camcorder is connected to a PC.	While the camcorder is connected to the PC, use Explorer to right-click the camcorder drive icon and select “Eject”.	128
When the time stamp of a file on a disc is viewed on a PC, it is different from the actual recording time.	The file system of this camcorder is operated on Greenwich Mean Time (GMT), and time lag information has not been set. With Windows® as of July, 2007, the time stamp of files viewed on Explorer looks different from the actual recording time. The actual recording time will appear for the date/time indication on the playback screen.	—
It takes a long time to save a video edited on the video editor of ImageMixer 3 HD Edition for BDCAM.	If you are editing a video file whose contents are different from those of the project settings, it may take some time, since the entire video file must be re-encoded. Reconfirm the project settings.	—

Miscellaneous

Symptom	Cause and Correction	Reference page
The camcorder does not work.	Is a fully charged battery attached? Is the camcorder powered from the mains? Connect a power source.	23, 45
Power does not come on, or no operation occurs by pressing any button.	Press RESET , then turn on the power again.	163
	Has the camcorder been subjected to impact? The camcorder could be damaged. Consult your dealer.	—
The date and time are incorrect.	Has the camcorder been left unused for a long period of time? The internal backup memory battery may be discharged. Connect the AC power adapter/charger to recharge it.	68

Symptom	Cause and Correction	Reference page
Pressing QUICK START does not enter sleep mode.	<ul style="list-style-type: none"> The camcorder enters sleep mode when QUICK START is pressed only while in recording pause mode. Check the following causes: <ul style="list-style-type: none"> there is no disc in the camcorder while the power switch is set to “BD/DVD”. there is no SD memory card in the camcorder while the power switch is set to “SD CARD”. the HDD, disc, or card does not have sufficient remaining free space. An usable disc or card is inserted. the disc navigation screen is appearing. during playback. 	48
No scene can be deleted.	<p>Is the cursor placed on the scene to be deleted?</p> <p>If the selected scene is framed in red, it can be deleted, even if you use yellow cursor to select the scene. Check the colours of the cursor and bar graph on the thumbnail screen.</p>	107
Disc cannot be removed. (Cover will not open.)	<p>Did you detach the battery or AC adapter/charger before setting the power switch to “OFF”?</p> <p>Isn't the camcorder powered off because the battery pack is empty?</p> <p>Is the battery charged?</p> <p>Connect a charged battery or the AC adapter/charger to the camcorder, and then turn the power switch to “OFF”, then press down the DISC EJECT switch.</p> <p>Isn't the power switch set to “ON”? Turn the power switch to “OFF”, and then press the DISC EJECT switch.</p>	23, 45
The remote control does not operate.	Do you operate the remote control toward the remote control receiver of the camcorder?	17
	If the camcorder's remote control receiver is exposed to strong light such as direct sunshine or fluorescent light, the remote control does not work. Adjust the position or angle of the camcorder.	—
	Is the lithium battery inserted in the remote control? Check that the polarization of the lithium battery is correctly set. The lithium battery may be empty. Replace the battery to a new one.	18
	Is the camcorder powered on? If not, turn on the camcorder.	24

Symptom	Cause and Correction	Reference page
Disc cover cannot be closed.	Is the disc correctly inserted? Remove the disc and then reinsert it.	41
	Connect a fully charged battery or AC adapter/charger, and then turn the camcorder on and try again.	23, 45
Operating noise is heard.	This is not a fault. A quiet operating sound is heard as the disc rotates during recording or playback, etc.	—
Some vibrations are felt or slight sound is heard from mechanism.	These vibrations or sound are caused by HDD/disc drive. This does not indicate a fault.	—
<ul style="list-style-type: none"> No operation can be performed because the ACCESS/PC or CARD ACCESS indicator on this camcorder remains lit or flashing. After a disc or card is inserted, it takes some time until recording is possible. 	<p>In the following cases, it will take more time than usual until operation is possible:</p> <ul style="list-style-type: none"> Immediately after a disc or card is inserted. When a long time has elapsed since the camcorder was turned off last. When the temperature is greatly different from the status of previous recording. When a scratched or dirty disc is inserted. When the camcorder is subjected to strong vibrations. When the battery or DC power cord was disconnected before turning the power switch off. 	—
No image in the viewfinder.	<ul style="list-style-type: none"> Is the LCD monitor open? No image will appear in the viewfinder unless the LCD monitor is closed (default setting). You can change this setting. Is the camcorder set to the sleep mode? Press QUICK START to release sleep mode. 	21, 48
No image appears on the LCD screen or in the viewfinder.	<ul style="list-style-type: none"> Is the camcorder set to sleep mode? Press QUICK START to release sleep mode. In playback mode, did the last scene viewed end in a wipe to black edit? Press DISC NAVIGATION. Is camcorder connected to PC? Unplug the PC connection cable. 	48, 109, 127

Cautions on Use of this Product - Be sure to read this information -

● Cautions on the HDD (DZ-BD7HE)

Save the data recorded on HDD.

- To back up the data recorded on HDD, save it on a DVD.
It is also recommended that you use this camcorder to dub the data. You can also use a PC to save the data on a DVD.
- It is recommended that you periodically save your recordings.

Carefully check the temperature of this camcorder.

- If the temperature of this camcorder is too high or too low, normal recording or playback may not be possible.
- If the temperature of this camcorder is too high or too low, the message “The temperature of HDD/BD is outside the operating temperature range. Turn off power, then turn on again.” may appear. Even if this happens, a DVD may be usable. So it is recommended that you carry a spare DVD even if you intend to record on the HDD or BD.

Do not place this camcorder near a magnet or magnetic field.

- If you do, recording, playback or dubbing may not be possible.

Do not subject the camcorder to impacts.

- This camcorder cannot be used while sky diving, riding on a roller coaster, bungee jumping, or other situations where weightless or large impacts may ensue.

● Cautions on use

This camcorder is not intended for professional-use.

- The camcorder is designed and produced for home-use recording and playback. Do not use the camcorder for professional applications.
- The camcorder cannot be used for a long time continuously as a surveillance camera/monitor. If you use it for a long continuous period of time, the temperature of the camcorder could exceed the limit and the recording/playback operation may slow down or other faults could occur. If this happens, turn it off and wait for a while before using it again.

The LCD is a very delicate display device.

- Do not hold the viewfinder or LCD monitor when lifting the camcorder.
The viewfinder or LCD monitor could detach and the camcorder may fall.
- Do not press its surface with force, hit it or prick it with a sharp object.
- If you push the LCD surface, unevenness in display may occur. If unevenness does not disappear soon, turn the camcorder off, wait for a few moments, and then turn it on again.
- Do not place the camcorder with the open LCD monitor down.
- Close the LCD monitor when not using the camcorder.

Liquid crystal display (LCD) and viewfinder

- The LCD monitor and viewfinder are the products of highly precise technology. Among the total number of pixels (approx. 210,000 pixels for LCD monitor and equivalent to approx. 200,000 pixels for viewfinder), 0.01% or less pixels may be missing (black dots) or may remain lit as coloured dots (red, blue, green). This shows the limitations of the current technology, and does not indicate a fault that will interfere with recording.

Do not subject the camcorder to impact.

- This camcorder is a precision machine. Take great care that you do not strike it against a hard object or let it fall.
- When using a tripod, firmly secure the camcorder on it. Do not use the camcorder with a tripod in a place where it is subject to severe vibrations or impact.

Do not point directly at the sun.

- If direct sunlight strikes the lens or viewfinder, the camcorder could malfunction or a fire could occur.
- Do not leave the camcorder with the LCD monitor exposed to direct sunlight: This could cause malfunctions.

No sand or dust!

- Fine sand or dust entering the camcorder or AC adapter/charger could cause malfunctions or defects.

Heat on surface of product

- As the disc mechanism will be very hot immediately after use, do not touch the metallic parts.
- The surfaces of the camcorder, AC adapter/charger and battery will be slightly warm, but this does not indicate a fault.

Be careful of ambient temperature.

- If the temperature of this camcorder is too high or too low, normal recording/playback may not be possible.
- Take care that the temperature of this camcorder, when connected to PC does not rise excessively (reference for usage: approx. 30 minutes at about 30°C).
- If you need to use the camcorder for recording/dubbing to BD/DVD in a place where the temperature is high, avoid overheating by using the camcorder intermittently.

Be careful of moisture condensation.

- When you move the camcorder between places where the difference in temperatures is great—such as entering a lodge from a ski slope or going out of a cooled room or vehicle—condensation (vapour in air warmed or cooled to water droplets) could occur on the lens and/or inside the camcorder. If condensation occurs, do not open the disc compartment lid or card slot cover if possible. If condensation occurs on the lens, wipe it off with a soft, dry cloth. Even if the external surface of camcorder has dried, condensation may remain inside. Therefore, turn the camcorder off and leave it in a dry place for at least 1–2 hours before using it again.

Do not use the camcorder near strong radio waves or magnetism.

- If the camcorder is used near strong radio waves or magnetism, such as a radio wave tower or electric appliances, recording or playback may stop, or noise could enter the video and audio that are being recorded. During playback of normally recorded video and audio, noise may also be present in picture and sound.
At worst the camcorder could malfunction.

Do not expose the camcorder to insecticide.

- Insecticide entering the camcorder could dirty the pickup, and in such a case, the camcorder might not operate normally.

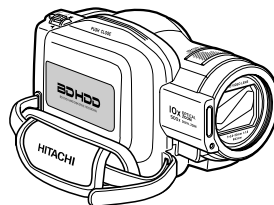
Do not use a generally available 8 cm CD lens cleaner.

- Cleaning the DVD lens is not necessary when using this camcorder in the usual way.
- Using 8 cm CD lens cleaner could cause this camcorder to be faulty.
- If you have to clean the lens, use a Hitachi Maxell cleaner that is exclusively for 8 cm DVD discs.

About the protection film on the camcorder (disc compartment side)

- Check if there is protection film on the disc compartment of the camcorder, and if there is, remove it before you start using the camcorder. (There may not be protection film depending on the time when the camcorder was produced.) Small scratches or fine lines on the surface of the protection film do not have any influence on the body of the camcorder. You can peel off the protection film as follows:

- 1 Use a piece of scotch (adhesive) tape, hold onto half of it, then firmly adhere the other half onto the protection film.
- 2 Once the scotch tape has been firmly applied onto the protection film, peel back the tape to lift the protection film off the camcorder.
Use gummed tape if scotch tape is not adhesive enough.

**● Cautions on Storage****Do not leave the camcorder in a place where the temperature is very high for a long period of time.**

- The temperature on beach sand or inside a closed vehicle or boot can become very high in a hot season. If you leave the camcorder in such a place, it could malfunction or the case could be damaged. Also, do not expose the camcorder to direct sunlight or place it near a heater.
- Leaving the battery attached or storing it at high temperature could shorten its life.
Detach the battery from the camcorder and store it in a cool place.

Do not store the camcorder in a place where the humidity is high or in a dusty place.

- Dust entering the camcorder could cause malfunctions. If the humidity is high, the lens could be mouldy, and the camcorder could become inoperable. It is recommended that you put the camcorder with desiccant in a box when storing it in a closet, etc.

Do not store the camcorder in a place subject to strong magnetism or intense vibrations.

- This could cause malfunctions.

● **Cleaning**

Be sure to set the power switch to “OFF” before cleaning the camcorder.

Cleaning the LCD monitor

- Use dry, soft cloth to wipe dirt off. When cleaning the LCD monitor, be careful not to use force, scratch it, or subject it to impact. Doing such could cause a defect in the LCD monitor, result in display unevenness, or damage the LCD monitor.

Cleaning the surface of the camcorder

- Do not wipe the surface of the camcorder hard with any foreign object, such as grit adhering to the camcorder, and do not use rough fabrics to clean the surface of the camcorder. Doing so could scratch it.
- Use soft cloth to gently wipe dirt off the surface of the camcorder.
- If dust adheres to the viewfinder lens, remove it using a cotton swab. Do not rub the lens with force. Doing so could scratch the lens.

Do not use benzene or thinner to clean the surface of the camcorder.

- The coating of the case could peel off or the case could deteriorate. Wipe off dirt on the case with a soft cloth which has been completely wrung out. When using chemical cleaning cloth, follow instructions for use.

● **Handling HDD/Discs**

Using HDD/discs

- Do not do the following when the ACCESS/PC indicator is lit:
 - shake or subject the camcorder to impacts, or open/close the LCD monitor
 - cut the power, or remove the battery or AC adapter
 - remove the recording media.

As the ACCESS/PC indicator will remain lit for a while after concluding recording, please continue to observe the above precautions while the indicator is lit.

- While using HDD/BD/DVD, if the power is cut accidentally while the ACCESS/PC indicator is lit or flashing, connect the AC adapter and then turn on the power again. When using a BD/DVD, turn the power back on while the BD/DVD is loaded in the camcorder. The HDD/BD/DVD will be restored. (p.140)
- Use a disc which is not dirty, scratched, or warped. (BD/DVD)
- A Hitachi Maxell disc is recommended. (BD/DVD)
- If there is concern that the camcorder may be subjected to large vibrations or impact during transport, remove the BD/DVD and protect the camcorder using soft protective materials.
- When the camcorder is subjected to an impact while a BD/DVD disc is loaded, a mark may form on the disc surface due to the impact protection function for the disc and pickup. This mark can be wiped off using a disc cleaning cloth.
- Be careful when removing the disc since the metal of removal slot of camcorder, and disc itself, may be hot.

- If the camcorder is not used for long periods of time, remove the disc from the camcorder.
- When storing disc, replace it in the plastic case in which it was purchased.
- Be careful that no condensation occurs on disc.
- Do not place disc in following places:
 - **Direct sunlight for a long time**
 - **Where humidity is high or in dusty place**
 - **Where there is heat from a heater, etc.**

- Block noise in playback image, momentary stop of playback image
- Sound interrupted during playback, or abnormal sound
- Blue thumbnail display* (Fig. 1)
- Disc cannot correctly be recognised
- Disc cannot be formatted
- Delay between video and audio
- A recording of one scene may be divided into two scenes, but the second scene may not be recorded
- Recording/Playback is not possible

Disc Navigation

All Scenes

0010/0027

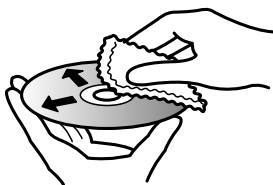
PLAY SELECT EXIT

*



Block noise

- Use the disc cleaning cloth provided to lightly wipe off any dirt adhering to the disc as shown in the figure. Do not wipe the disc with force: Doing so could cause scratches. Never use solvent (thinner, water, antistat or detergent) for cleaning. Lightly wash the dirty cleaning cloth with detergent: The dirt removal capacity of the cloth will improve (rinse the cloth well with water so that no detergent remains).



Use the disc cleaning cloth to clean from inner to outer edges in axial direction.

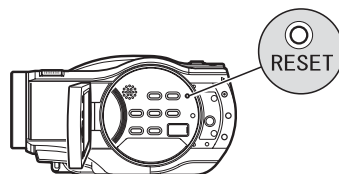
Note when transferring this camcorder or discarding discs and SD memory cards

- The “Format” function on this camcorder will only change the file control information. It will not completely delete the data in the built-in hard disk and your personal data could leak out. To prevent the data from leaking out, execute complete deletion of the HDD following the procedures below.
 - 1 While the camcorder is in HDD recording pause mode, press **DISC NAVIGATION**, then press **MENU**.
 - 2 Press **⏮️⏭️** to select “HDD Setting”, then press **▶️▶️**.
 - 3 Press **⏮️⏭️** to select “Full Format”, then press the confirmation button.
 - 4 Press **⏮️** to select “YES”, and then press the confirmation button to confirm the setting and begin HDD full format.
- “Formatting” or “deletion” using the functions of the camcorder or a PC will change only the file control information. It will not completely delete the data on disc or memory card.
- When transferring or discarding a disc or memory card, it is recommended that you physically destroy it or use deletion exclusive software (generally available) to completely delete the data on it. It is user's responsibility to control the data on disc and memory card.
- Hitachi will not accept any responsibility for leaking of personal data.

System Reset

If the camcorder does not operate normally, perform “System Reset”. The camcorder may recover to normal. “System Reset” will reset all settings to the factory defaults. The date and time will also be reset. Set the date and time again before using the camcorder.

- 1 Set the power switch to “OFF” to turn the camcorder off.
Detach the battery or AC adapter/charger.
- 2 Use a fine tipped pen to hold down **RESET** for several seconds.
All settings will be reset.



Notes

- Do not press **RESET** with undue force.
- Before pressing **RESET**, be sure to remove the disc from the camcorder. Pressing **RESET** with a disc loaded may erase the scenes recorded on the disc.

● List of setting items

	Item	Default	Setting method
Camera Functions Setup	Program AE	Auto	p.76
	White Balance	Auto	p.78
	EIS	On	p.80
	Digital Zoom	40×	p.70
	MIC. Filter	Off	p.81
	Flash	Auto	p.82
	Auxiliary Line	Off	p.80
Record Functions Setup	HD Video Mode	HX	p.84
	SD Video Mode	SF	p.84
	Self Timer	Off	p.85
LCD/EVF Setup	LCD Brightness	◀ [Bar] ▶	p.68
	EVF Brightness	◀ [Bar] ▶	p.68
	Colour Level	◀ [Bar] ▶	p.68
	EVF Display	Auto	p.68

	Item	Default	Setting method
Date Setup	Date Set	1/1/2007 0:00	p.25
	Date Mode	D/M/Y	p.69
Initial Setup	Beep	On	p.68
	Power Save	Off	p.68
	Record LED	On	p.83
	Language	English	p.24
	Demo Mode	Auto	p.69

- Some items will not appear, depending on the disc or card inserted.

End User License Agreements for Operating System Software

OPERATING SYSTEM LICENSE INFORMATION

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<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

Major Specifications

Image sensor		1/2.8-inch CMOS sensor
		Total number of pixels approx. 5,300,000
		Number of effective pixels
		Movie: approx. 2,070,000 Still: approx. 4,320,000
Lens		F1.8–3.0 f = 5– 50 mm Filter diameter: 43 mm Thread pitch: 0.75 mm
Focus		Auto/Manual
Zoom		Movie and Stills: Optical 10× Movie: 40×–500× with digital zoom added
Required minimum illumination		In Auto: 24 lx
Viewfinder		0.2-inch colour (equivalent to approx. 200,000 pixels)
LCD monitor		2.7-inch colour TFT (approx. 211,200 pixels)
Electronic image stabiliser		Electronic type
Self-timer recording		Still recording only
External microphone jack		Ø3.5 mm stereo mini-jack (a plug-in power type microphone only)
Capacity of built-in HDD (DZ-BD7HE)		Approx. 30 GB
Recording mode		Movie (with sound): Hi-Vision (High Definition) image (movie) quality (HD Video Mode) Standard Definition image (movie) quality (SD Video Mode) Still (with SD memory card)
Maximum recordable time	HDD (DZ-BD7HE)	Approx. 4 hours (HX) Approx. 5 hours (HF) Approx. 8 hours (HS)
	BD	Approx. 60 minutes (HX) Approx. 80 minutes (HF) Approx. 120 minutes (HS)
	DVD-RAM/DVD-RW/DVD-R/+RW (per side)	Approx. 20 minutes (SX) Approx. 30 minutes (SF)
Maximum number of recordable stills	SD memory card	Approx. 400 (when using 1 GB card)

Movie recording pixels		HX: 1920 × 1080 HF/HS: 1440 × 1080 SX/SF: 720 × 576
Recordable discs		8 cm BD-RE 7.5 GB 2x (Ver. 2.1) 8 cm BD-R 7.5 GB 2x (Ver. 1.1) 8 cm DVD-RAM (conforming to DVD-RAM Ver. 2.1) 8 cm DVD-RW (conforming to DVD-RW Ver. 1.1, 2x speed [2x/1x]) 8 cm DVD-R (conforming to DVD-R for General Ver. 2.0) 8 cm +RW (conforming to +RW Ver. 1.2)
Recordable card		SD memory card
Recording format	HDD (DZ-BD7HE)/BD-RE/BD-R	Movie: BD-RE: BD-RE Ver. 3.0 standard (Dolby Digital) BD-R: BD-R Ver. 2.0 standard (Dolby Digital)
	DVD-RAM/DVD-RW (VR mode)	Movie: Conforming to DVD video recording (DVD-VR) format (Dolby Digital)
	DVD-RW (VF mode)/DVD-R	Movie: Conforming to DVD video format (Dolby Digital)
	+RW	Movie: DVD+RW video format (Dolby Digital)
	Card	Still: JPEG standard (2400 × 1800 pixels) When capturing still images: 1920 × 1080 pixels (HDD/BD) 640 × 360 pixels (DVD)
Jacks		HDMI OUT terminal × 1, Video/audio output × 1, MIC jack × 1, PC connection terminal (connected to PC USB port) × 1
Battery system		Lithium-ion
Power consumption		When recording in HX mode with LCD monitor off DZ-BD7HE: approx. 8.5 W (during BD-RE writing) (approx. 5.7 W average (HDD use)) DZ-BD70E: approx. 8.5 W (during BD-RE writing) (approx. 6.7 W average (BD-RE use))
Dimensions (W × H × D)		DZ-BD7HE: Approx. 80 × 87 × 165 mm (including supplied battery pack, excluding hand strap)
		DZ-BD70E: Approx. 77 × 87 × 165 mm (including supplied battery pack, excluding hand strap)
Operating temperature (humidity)		0 – 40°C (less than 80%) 0 – 30°C when connected to PC
Allowable operating altitude (DZ-BD7HE: when using HDD)		3,000 m or less
Weight		DZ-BD7HE: Approx. 630 g (without battery pack nor disc) DZ-BD70E: Approx. 575 g (without battery pack nor disc)

Total weight when recording	DZ-BD7HE: Approx. 705 g (When using the battery pack DZ-BP14S) DZ-BD70E: Approx. 650 g (When using the battery pack DZ-BP14S)
Provided accessories	AC adapter/charger, Battery pack, AV/S output cable, HDMI cable, Infrared remote control, Lithium battery for remote control, Mains lead, DC power cord, Software CD-ROM, PC connection cable, Single-sided 8 cm BD-RE disc, Disc cleaning cloth

Storage capacity of HDD/BD/DVD/Card

• Recordable time on HDD

Recording quality	Movie recordable time	Application
HX	Approx. 4 hours ^{*1}	High quality
HF	Approx. 5 hours ^{*2}	Standard quality
HS	Approx. 8 hours ^{*3}	Extended recording

• Recordable time on BD

Recording quality	Movie recordable time	Application
HX	Approx. 60 mins. ^{*1}	High quality
HF	Approx. 80 mins. ^{*2}	Standard quality
HS	Approx. 120 mins. ^{*3}	Extended recording

Note

If recording is performed in HX mode within high temperature environments, the image quality may be degraded to an HF equivalent.

• Recordable time on DVD

Movie recordable time on one DVD (on single side) (when recording only movies)

Recording quality	Movie recordable time	Application
SX	Approx. 20 min. ^{*4}	High quality
SF	Approx. 30 min. ^{*5}	Standard quality

^{*1}: Variable bit rate approx. 15 Mbps (of which, audio 256 kbps)

^{*2}: Variable bit rate approx. 11 Mbps (of which, audio 256 kbps)

^{*3}: Variable bit rate approx. 7.5 Mbps (of which, audio 256 kbps)

^{*4}: Variable bit rate approx. 9 Mbps (of which, audio 256 kbps)

^{*5}: Variable bit rate approx. 6 Mbps (of which, audio 256 kbps)

Note

If recording is performed in SX mode within high temperature environments, the image quality may be degraded to an SF equivalent.

• **Maximum number of scenes that can be recorded/dubbed on HDD/one disc**

Recording media	Maximum number of scenes
HDD*1	3999*3
BD-RE*2/BD-R*2/DVD-RAM*2/DVD-RW*2	999*3
DVD-R*2	930*3
+RW*2	254

*1: Recording only

*2: Per disc (one side)

*3: Combining scenes will not increase the remaining number of recordable scenes.

If there are combined scenes, the maximum number of scenes in the table may not be the same as the actual maximum number of scenes that can be recorded/dubbed.

• **Maximum number of dates that can be recorded/dubbed on HDD/one disc**

Recording media	Maximum number of dates
HDD*1	999
BD-RE*2/BD-R*2	900
DVD-RAM*2/DVD-RW*2/DVD-R*2	99
+RW*2	49

*1: Recording only

*2: Per disc (one side)

• **SD memory cards of various capacities and recordable number of stills**

Capacity	32 MB	64 MB	128 MB	256 MB	512 MB	1 GB	2 GB
Recordable number of stills	Approx. 10	Approx. 24	Approx. 50	Approx. 100	Approx. 200	Approx. 400	Approx. 800

• **Still's file size**

The file size of a single still picture (JPEG) is 2,400 KB (approx.).

Note

Still cannot be recorded on HDD/disc.

Glossary

Audio feedback

A screeching noise which may be produced when the camcorder is connected to a TV or speakers. To prevent the noise, keep a distance between the camcorder and the TV or speakers, or turn off the volume of the connected device.

Double-sided disc

A disc which allows recording on both sides.

Finalise

The process of enabling you to play back BD-R/DVD-RW (VF mode)/DVD-R/+RW recorded on this camcorder using other BD/DVD recorders/players.

Formatting

The process of preparing a disc for use by creating an empty file system. This is also known as initialising a disc.

HDMI output terminal

Connects the camcorder to a TV. The HDMI output terminal provides better picture quality on the connected TV than the component jacks.

HD movie image quality/ HD image quality

Refers to hi-vision image quality. HD is an abbreviation for High Definition.

NTSC

NTSC is one of the standard colour television systems. NTSC is in use in the United States, Japan, Taiwan, South Korea, the Philippines, Central and South America, and some other countries.

PAL

PAL is one of the standard colour television systems. PAL is in use in Europe, China, and some other countries.

SD memory card

A memory card standard for recording images. This camcorder allows for recording still images to SD memory card.

SD movie image quality/ SD image quality

Refers to an image quality standard that is not hi-vision. SD is an abbreviation for Standard Definition.

Single-sided disc

A disc which allows recording on one side only.

VF (Video) mode

One of two modes for using a DVD-RW disc.

You need to finalise a DVD-RW disc in VF mode before playing it back on another device. After finalising, you cannot make additional recordings on the DVD-RW disc, regardless of its free space. The advantage of VF mode is that it is highly compatible with other DVD players.

VR mode

One of two modes for using a DVD-RW disc.

The advantage of VR mode is that you can edit (split, delete and combine) movies using the camcorder, and, by deleting unnecessary scenes, you can free up space for more recording.

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SOME DO'S AND DON'TS ON THE SAFE USE OF EQUIPMENT

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

★★★★★★★★★

DO read the operating instructions before you attempt to use the equipment.

DO ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

DO consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

DO be careful with glass panels or doors on equipment.

★★★★★★★★★

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way — switch off, withdraw the mains plug and consult your dealer.

DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off using the switch on the equipment and make sure that your family know how to do this. Special arrangements may need to be made for infirm or handicapped people.

DON'T use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

DON'T listen to headphones at high volume, as such use can permanently damage your hearing.

DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the life of the equipment.

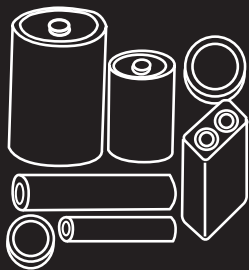
DON'T use makeshift stands and ***NEVER*** fix legs with wood screws — to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.

DON'T allow electrical equipment to be exposed to rain or moisture.

ABOVE ALL

- ***NEVER*** let anyone especially children push anything into holes, slots or any other opening in the case — this could result in a fatal electrical shock;
- ***NEVER*** guess or take chances with electrical equipment of any kind
- it is better to be safe than sorry!

★★★★★★★★★



BATTERY SAFETY GUIDELINES

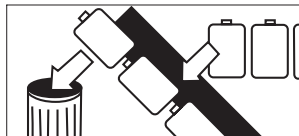
PLEASE PHOTOCOPY AND DISPLAY

Used correctly, domestic batteries are a safe and dependable source of portable power. Problems can occur if they are misused or abused — resulting in leakage or, in extreme cases, fire or explosion.

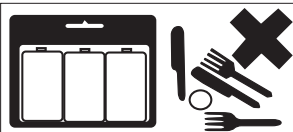
Here are some simple guidelines to safe battery use designed to eliminate any such problems.



Take care to fit your batteries correctly, observing the plus and minus marks on the battery and appliance. Incorrect fitting can cause leakage or, in extreme cases, fire or even an explosion.



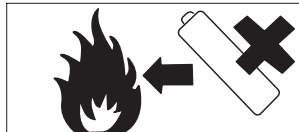
Replace the whole set of batteries at one time, taking care not to mix old and new batteries or batteries of different types, since this can result in leakage or, in extreme cases, fire or even an explosion.



Store unused batteries in their packaging and away from metal objects which may cause a short-circuit resulting in leakage or, in extreme cases, fire or even an explosion.



Remove dead batteries from equipment and all batteries from equipment you know you are not going to use for a long time. Otherwise the batteries may leak and cause damage.



Never dispose of batteries in fire as this can cause them to explode. Please put dead batteries in with the normal household waste.



Never attempt to recharge ordinary batteries, either in a charger or by applying heat to them. They may leak, cause fire or even explode. There are special rechargeable batteries which are clearly marked as such.



Supervise children if they are replacing batteries themselves in order to ensure these guidelines are followed.



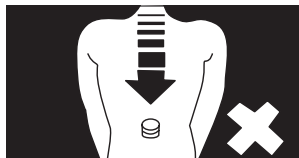
Remember that small button cell batteries such as used in some hearing aids, toys, games and other appliances, are easily swallowed by young children and this can be dangerous.



Keep loose button cells away from young children.



Make sure battery compartments are secure.



Seek medical advice if you believe a cell has been swallowed.

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